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A Window on Early Education in Ireland: the First National Report of the IEA Preprimary Project

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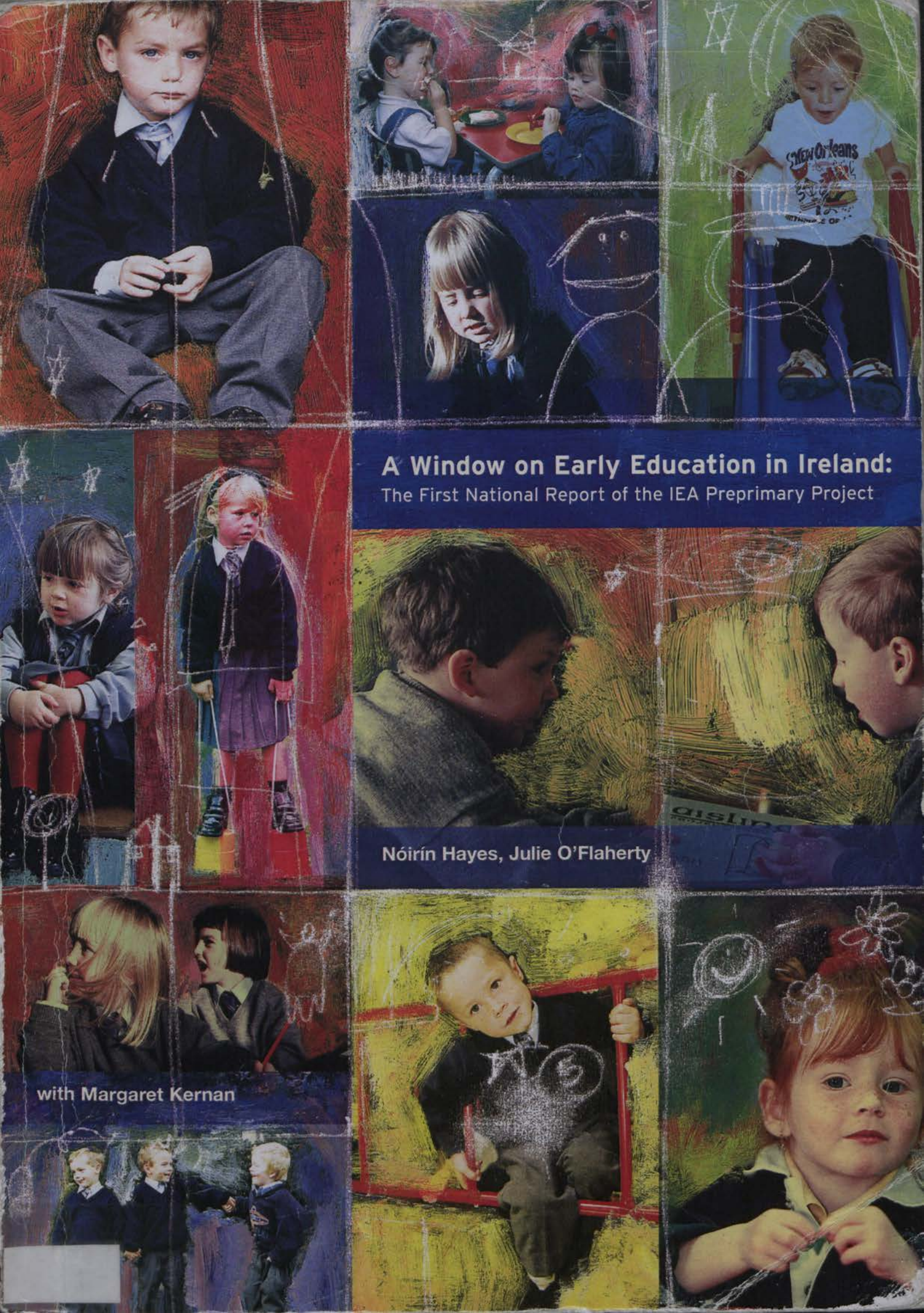

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The First National Report of the IEA Preprimary Project

Nóirín Hayes, Julie O'Flaherty

with Margaret Kernan

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The views expressed in this Report are the authors' own, and do not necessarily reflect those of the above organisations or individuals. We accept full responsibility for the content and for any errors or omissions.

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INTRODUCTION

Demographic, social and economic factors are contributing to the growing interest in early childhood care and education in Ireland. There has been an increase in demand for, and provision of, services particularly in the private sector. However, such developments have largely been unregulated, a situation which should improve with the recent implementation of the Child Care (Preschool Services) Regulations, 1996. The emerging interest in early years services has been most recently highlighted by the Partnership 2000 (1996) document which charges the Department of Equality and Law Reform (now the Department of Justice, Equality and Law Reform) to draw the varied strands of early childhood services together into a cohesive framework for the childcare sector.

A wide body of international research has demonstrated the value of high quality early childhood services to both the child and society. However, there is little detailed information available in Ireland about who uses early childhood services, how parents select settings, what children experience in different setting types or the quality and appropriateness of such services. This Report represents one important step in the emerging database on early childhood experiences and will act as a rich source of further research in the field. The information presented will assist in the planning and policy development around this important area.

The focus of this Report is the Irish 4-year-old child and his/her experiences in selected settings outside the home. The study, undertaken by the Early Childhood Research Centre at the Dublin Institute of Technology, is part of a cross-national project - the Preprimary Project - under the auspices of the International Association for the Evaluation of Educational Achievement (IEA). Monographs detailing the cross-national findings of the IEA Preprimary Project have and will be published by the International Coordinating Committee in collaboration with the National Research Coordinators.

The Report begins with a chapter outlining the impetus behind the initiation of the IEA Preprimary Project in Ireland and the specific objectives of the study. This is followed by a chapter which describes current early childhood provision in Ireland and one detailing the methodology of the project. Chapters four to eight present the results of the study. Each chapter begins with a literature review and is followed by a description of the instruments, the findings, a brief discussion and a summary of the main findings. The final chapter of the report is a conclusion which draws together the findings and identifies directions for future research and implications for future policy and practice.

As with any research study of this size, the process nature of analysis ensures that the report is incomplete, and for every finding presented there are new questions arising, other analyses and interactions to be explored.

CHAPTER 1 | THE IEA PREPRIMARY PROJECT - IMPETUS AND OBJECTIVES

The contemplation on things as they are,
Without error or confusion,
Without substitution or imposture,
Is in itself a nobler thing
Than a whole harvest of invention.

Sir Francis Bacon

Observation of what is actually happening in different contexts gives a good basis for evaluating the impact of different services on the groups for which they have been developed. Observational studies are, however, expensive and time-consuming and often very difficult to carry out. There is very little observational data available in the field of education in Ireland although a number of small-scale observational studies have been undertaken as part of local/regional projects. The attraction of the IEA Preprimary Project to the research coordinator of the Irish study was the integration of observational data into the overall analytical framework of the project.

1.1 What does IEA mean?

The International Association for the Evaluation of Educational Achievement (IEA) is a non-governmental, non-profit organisation of research institutions, universities, and ministry of education units in some fifty countries that is well known for its twenty-five years of comparative international surveys in science, maths, written composition, and other academic areas. As surveys have identified specific educational problems and policy makers have made decisions based on these research findings, IEA findings have affected educational systems around the world. The designated IEA centre in Ireland is the Educational Research Centre in Drumcondra, although the Preprimary Project is coordinated through the Dublin Institute of Technology at the Early Childhood Research Centre, Rathmines House, Rathmines Road, Dublin.

1.2 The IEA Preprimary Project

The IEA Preprimary Project is designed to assess the need for, and utilisation of, early childhood care and educational arrangements, the quality of the child's experience in these settings, and the growing role that various care and educational arrangements play in the development of the world's young children.

There is little research data available on the 'quality of life' of 4-year-olds in Ireland. Some research has been carried out in relation to practice in primary schools, for example O'Rourke and Archer (1987), but this has been, in the main, questionnaire type surveying rather than observational. There has been some limited observation research undertaken at postgraduate level (Hayes, 1983; Horgan, M. 1987; Dunlea, 1990; Douglas, 1993; Horgan, S. 1995). The lack of large- scale, national data, however, means that we know very little about the actual experiences of 4-year-olds in Ireland, and as a consequence, may be failing to explicitly provide for their specific needs in our early childhood care and education settings.

There is much international research concerning the impact of early services on child development. Melhuish (1993) makes the point that a comprehensive understanding of the relevant issues requires the integration of research across national boundaries because consideration of research within one country may present a distorted picture due to the political and cultural limitations which influence policy, practice and provision. The IEA Preprimary Project is a large cross-national investigation into the years prior to children's entry into compulsory education (age six in Ireland). It offers a unique opportunity to examine a wider range of variation in early services than can be found within any single coun-

try. It also allows global comparisons of relationships between usage of early childhood services and the effects of this usage on the lives of children and families (Opper and Olmsted, forthcoming).

Participating nations in this phase of the project include Belgium, Finland, Greece, Ireland, Italy, Spain, Poland, Romania, and Slovenia in Europe; the People's Republic of China, Hong Kong, Indonesia and Thailand in Asia; Nigeria in Africa and the United States in North America.

Each participating country in the IEA project has a National Research Coordinator (NRC) responsible for the day-to-day running of the study in his/her own country. The overall project management is the responsibility of an International Coordinating Committee (ICC) located at the High/Scope Educational Research Foundation in Ypsilanti, Michigan, US. The ICC, in cooperation with the NRCs has developed and piloted the various instruments used by the participating nations to gather data and is responsible for the final cross-national data analysis and monograph publications. In addition, each country disseminates its own findings through, for example, national reports, journal articles and conference presentations.

The project has been designed in three phases:

- **Phase 1 (1986 - 1992)** produced profiles of national policies on the care and education of young children (Olmsted & Weikart, 1989; 1994) and used a household survey to identify and characterise the major early childhood care and educational settings used by families with 4-year- olds. Ireland did not participate in this phase of the project.

- **Phase 2 (1989-1995)** used extensive observational and interview data to examine the interactive and structural characteristics of the major early childhood settings and to explore the impact of expectation, curricular and familial factors on children's development status at age four.

- **Phase 3 (1993-1997)** completes the IEA Preprimary Project by documenting how these early experiences affect children's development status at age 7, an age when all children in participating countries will have had at least one year of formal schooling.

The purpose of the final phase of the project is to study the relationship between early childhood experiences at the age of 4 and the children's cognitive, language, social, physical and academic development at age 7, all having relevance to later school performance and success. Ojala (personal communication), argues that the phases of the IEA project reflect the context, input, process, and product (CIPP) model proposed by Stufflbeam as the basic principles for the evaluation of education. In the first phase special attention is given to the Context of early education; the second phase focuses on the Input and Process factors, and the final phase evaluates early education through Product evaluation.

1.3 The Project Framework

The conceptual framework for the IEA study is based on the ecological systems model of development described by Bronfenbrenner (1979;1992). This model recognises the complex interplay not only of humans and the environment, but also of various environmental factors. Bronfenbrenner points to the need to take a systematic approach to human development that does justice to the multiple interrelations between cultural contexts and the individuals who inhabit those contexts. He sees contexts as constituting an interconnected set including immediate and broader contexts. As Tudge, Hogan, Tammeveski, Kulakova, Meltas, Snezhkova and Putnam (1997) argue, to fully understand development it is necessary to consider the connections between aspects of the developing individual, the interpersonal relationships the individual has with various people who inhabit the same contexts, and the different contexts in which the individual's development occurs.

Ojala (forthcoming) highlights the challenging nature of this theoretical framework which will, for the first time, seek to carry out an international comparison of early childhood education in addition to evaluating the early childhood education systems in different countries. Previous IEA studies were directed at school age children and developed and used frameworks and research methods appropriate to the evaluation of compulsory schooling. Such methods are not directly applicable to the international assessment of early childhood education.

The IEA Preprimary Project, drawing on ecological and cross-cultural perspectives, explores the interplay of five major groups of variables: family characteristics and expectations; setting characteristics; teacher behaviour and expectations; child behaviour, and child developmental status. Not only is this set of variables comprehensive but it forms the basis for a 'process model of research' (Crahay, 1990) that seeks to understand not just *whether* but, more important, *how* early experiences influence children's short- and long-term development. Figure 1.1 presents the conceptual framework developed by Marcel Crahay (Chair, International Steering Committee of the IEA Project, 1985-1993).

The conceptual framework includes the five major groups of variables described below:-

Group of Variables	Example
• Family characteristics	Parental education and occupation Household composition
• Setting characteristics	Teacher education and experience Equipment and materials Group size and adult-child ratio
• Teacher characteristics	Beliefs about the importance of various areas of development for 4-year-olds Management of children's time Behaviours/interactions with children
• Child behaviours	Activities engaged in at the setting Involvement with other children Involvement with adults
• Child developmental status	Cognitive development Language development Preacademic skills

The national research coordinators have worked to ensure that the measures are culturally appropriate for the children and families studied and have selected the samples to reflect the particular interests of their nations.

1.4 Ireland's Involvement in the IEA Project

In September 1993 the IEA representative in Ireland at the Educational Research Centre, Drumcondra was contacted regarding Ireland's participation in the IEA Preprimary Project. Although the initial reaction was that there was no source of funding for the project, support was promised if funding could be secured. Support from the Department of Education, the Combat Poverty Agency, the Dublin Institute of Technology and others was secured and this allowed Phase 2 of the project to run from 1994 to 1997. In addition funding has now been secured to allow for the completion of Phase 3.

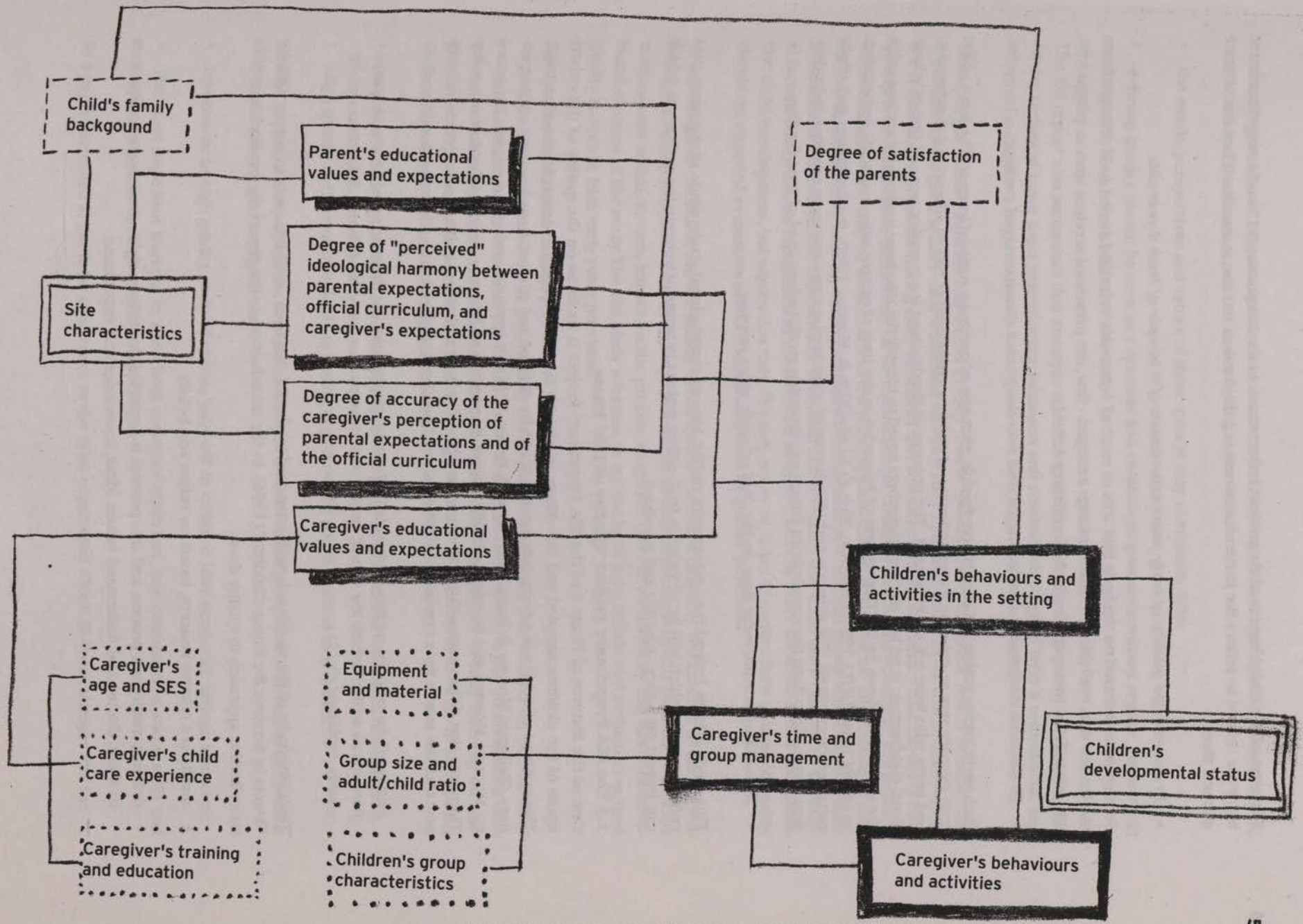

Figure 1.1 IEA Preprimary Project conceptual framework

The aims of the Irish element of the project reflect those of the International Coordinating Committee but were refined to reflect the particular interests of the funders and the researcher. They can be summarised thus:

- *To describe the quality of early years experiences of a sample of Irish 4-year-olds.*

Settings were selected on the basis that 20% or more of 4-year-olds in Ireland attend such settings. From the limited data available, two main settings emerged - first, the preschool services such as playgroups, and second, the junior infant classes in primary school.

- *To examine designated disadvantaged and non-designated disadvantaged settings.*

Each participating nation included, where feasible, elements of particular national interest. The focus of the Irish element was to describe the experiences of children considered at risk of educational disadvantage and peers who were not so designated. The concept of disadvantage is a complex one and that of 'educational disadvantage' is no less so. The researchers opted to identify the 'disadvantaged' school settings using the criteria laid down by the Department of Education at the time of sample selection while recognising, as others have (INTO, 1995; Kellaghan, Weir, Ó hUallacháin & Morgan, 1995), the limitations and crude nature of these criteria. The situation with 'disadvantaged' preschool settings was more complex and a decision was made to draw the sample from preschools reporting receipt of any level of State funding.

- *To build up a knowledge base in the field of early years services.*

This study affords Ireland the opportunity to link into an international study while at the same time collecting data which will be of value to Irish policy makers in terms of information and trends which can impact on policy, practice and provision.

1.5 The IEA Preprimary Project 'Quality of Life' Phase

One of the features of Phase 2 of the IEA Preprimary Project is its focus on the quality of the experiences of the children sampled and the efforts to identify factors of quality in early childhood settings. The concept of quality is a complex one and it can be defined and studied from a variety of perspectives (Balageur, Mestres & Penn, 1992; Moss & Pence, 1994). It is worth noting the caution expressed by Munton, Mooney and Rowland (1995) around attempting to find a common definition of quality. They note that differences will emerge between the different stakeholders in the quality debate and suggest that the search for a common definition should be abandoned and in its place we should seek a

> *universal framework within which definitions of quality can be deconstructed .... a conceptual framework within which the values, beliefs and interests that underlie different definitions can be clearly explained.(p.13)*

The complexity of the situation is well presented by the EU Network on Childcare in its report "Quality Targets in Services for Young Children" (1996). In the introduction to the report the network identifies its collective approach to quality thus:

- quality is a relative concept, based on values and beliefs

- defining quality is a process and this process is important in its own right, providing opportunities to share, discuss and understand values, ideas, knowledge and experience

- the process should be participatory and democratic, involving different groups including children, parents and families and professionals working in services
- the needs, perspectives and values of these groups may sometimes differ
- defining quality should be seen as a dynamic and continuous process involving regular review and never reaching a final, 'objective' statement. (p.7)

The EU report also recognises that attempts at defining quality and providing quality services require strong technical input from practitioners, managers and researchers coupled with a sympathetic and informed culture.

Tietze, Cryer, Bairrao, Palacios and Wetzel (1996) review various research studies which consider the requirements for good quality early childhood services. They conclude that despite much variety there is a remarkable agreement among early educators and researchers as to the factors that impact on the quality of services. These factors may be far removed from children, such as the economic and political environment; or they may be closer, such as the philosophical characteristics of the curriculum; or they may be factors directly relating to the children's own experiences, such as group activities, individual programmes and one-on-one interactions. Melhuish (1993) agrees that there are a number of structural factors which can be recognised as contributing to quality of early years services, in that they facilitate child development, but argues that they can only act as an index of quality. Such indices of quality should be regarded as markers and not actual measures of quality provision.

In the design of the IEA study, the setting survey (which includes details of the context of the experiences, the resources, space and ratio and equipment) yields data about these quality markers or process components which, in turn, impact on the process of quality itself as evaluated by the direct observational element of the study. The IEA study attempts to lay the basis for a debate and evaluation around quality factors in Irish early years provision.

1.6 Quality and Disadvantage

As well as the particular issue of quality, early educational research has also focused on the needs of young disadvantaged children and the effectiveness of different programme types on combating educational disadvantage. Sylva and Wiltshire (1993) have reviewed the impact of early learning on children's development and recognise that such learning can occur in a variety of settings. In concluding their review they draw the following conclusions:

- Preschool education leads to immediate, measurable gains in educational and social development.
- High quality early education leads to lasting cognitive and social benefits in children.
- The impact of early education is found in children from all social groups but is strongest in children from disadvantaged backgrounds.
- Investment in high quality early education 'pays off' in terms of later economic savings to society.
- The most important learning in pre-school concerns aspiration, task commitment, social skills and responsibility and feelings of efficacy. (pp.36-37)

In a paper presented at the same conference as the Sylva paper cited above, Skilbeck charges that the

democratic philosophy carries with it commitments in the public domain to addressing basic human needs and reducing inequality. The public costs, both economic and social of providing long term care argue for support for early intervention as either preventative or ameliorative. (p.11)

There have been a number of early intervention projects in Ireland. Three considerations have been identified as leading to the intervention programmes that exist (INTO, 1995).

- Early childhood experiences are important for the child's development.
- Entry to formal schooling is a major transition for children,* particularly those from disadvantaged backgrounds.
- Early disadvantages affect the child's enduring experience within formal schooling, because such disadvantages tend to be both persistent and cumulative.

**(usually at age four)*

The most well-known Irish intervention is the Rutland Street Project (1969 to 1974). This preschool project was located in the Rutland Street district of Dublin's north inner city. A special preschool curriculum with a strong emphasis on developing the child's language skills, was developed. An important element of the programme was the level of parental involvement. The project was directed by Dr. Thomas Kellaghan of the Educational Research Centre in Dublin. Results were somewhat inconclusive but at the end of the preschool period the mean IQ score of the group had risen to just below 100 (Holland, 1979). In line with similar research projects this score faded over the following years and by the end of the fifth year it was 91. In the long term, however, some important differences between the experimental and control groups emerged. Programme participants were significantly more likely to take public examinations, and while none of the control group of children completed second level education (to Leaving Certificate standard), 10% of programme participants did (Kellaghan & Greaney, 1993). Other intervention initiatives, including the recent Early Start and Breaking the Cycle initiatives, which were not in operation at inception of the IEA study, are outlined later in the Report.

1.7 Conclusion

There is a lack of detailed information on the early educational experiences of children in Ireland. The Irish element of the IEA Preprimary Project was designed to gather data about children's observed experiences in 109 nationally-distributed early childhood settings. In addition, researchers gathered information about the family backgrounds of 396 children, the structural characteristics of the early childhood settings, and teacher characteristics and their beliefs concerning the important areas of learning and development for young children. Finally, the study collected information on the development status of each child in a number of specific areas.

The findings of such a comprehensive study will allow us to answer questions which include:

- What are the structural features of preschools and junior infant classes in Ireland?
- What are the structural characteristics of settings that are designated disadvantaged as compared to those not designated?
- What expectations do parents and teachers have about the development of 4-year-olds?
- How do teachers spend their time in each of the setting types?
- What are the experiences of 4-year-olds in the settings studied?
- How are family characteristics and setting/teacher characteristics related to child experiences and their developmental status?
- What is the developmental status of the sample children?

The study raises questions for consideration by parents, policy makers, educational-training centres, managers and practitioners. It also raises new questions for further research and analysis.

CHAPTER 2 | EARLY CHILDHOOD EDUCATION PROVISION IN IRELAND

This chapter describes the structure and provision of early years education in Ireland. Particular characteristics highlighted include public and private provision, staff-child ratio, staff training and early years curriculum.

Although the results of a survey by Hennessy and Hayes (forthcoming) indicate that 75% of a sample of young Irish children experience out-of-home childcare before they enter the formal school system (the majority of these attending playgroups) the provision of early childhood services in Ireland is limited. What services exist are provided by both the public and the private sector; public sector provision consists of the preschools grant-aided by the Department of Health and by the Department of Education. Private sector provision takes the form of playgroups, naíonraí (Irish medium playgroups), nurseries and Montessori schools. There is no national policy to coordinate early childhood services, with the result that there are, for instance, no training regulations governing the education of preschool teachers: neither is there a recognised preschool curriculum.

In relation to structures, as is the case in many countries, an artificial divide between care and education exists in the field of early education in Ireland. Under the terms of the Child Care Act (1991), responsibilities in relation to preschools lie with the Minister for Health. Section 50 of the Act provides that the Minister may consult with the Minister for Education on educational aspects of provision governing preschooling. The distinction between early years settings in terms of those emphasising care and those emphasising education has become increasingly blurred as the importance of integrating the two concepts of care and education to the benefit of the child is gaining more recognition (O'Flaherty, 1995). In the introductory chapter of 'Early Education, The Quality Debate', Watt (1994) makes the point that 'care' and 'education' are interdependent and inseparable, "without good quality care good learning cannot happen" (p.5).

Demographic, social and economic changes both worldwide and in Ireland have resulted in an increased demand for early childhood services. Despite the increase in the participation rates of mothers in the work-force in Ireland (25% of mothers whose youngest child is 3 to 9 years are currently in employment, Department of Equality and Law Reform, 1994) there has been no coordinated increase in the provision of local, affordable, reliable, high quality child care services outside of the immediate family unit. Without such comprehensive provision parents may be forced to make compromises, not choices, when it comes to finding child care for their children.

2.1 Public Sector Provision

Department of Health - Early Services

Under the 1970 Health Act, the Department of Health is empowered through the Health Boards to provide grants towards the operating costs of centres catering for children in need of special support or for families needing support. This support varies from Health Board to Health Board. For example, the Eastern Health Board grant-aids up to 40 day nurseries whilst other Health Boards pay the fee for a particular child to attend private or community-based services such as a playgroup or naíonra. Through support for Family Support initiatives and for agencies working directly with families, such as Barnardo's, Health Boards also contribute to the development of certain early childhood services.

Department of Education - Infant Classes

Although children in Ireland are not obliged to start school until aged 6 years, parents have a certain amount of choice as regards when to send their children to school. In September of any year, up to 80% of 4-year-olds are actually in school (this figure was calculated in consultation with the Department of Education in preparation for the sampling for this project). Individual schools have their own policy with regard to the age at which they accept children. For example, one school might require children to be 4 from the preceding April, in order to keep intake numbers down. Another school might take children in before they are 4 if, for example, they are 4 in the September of that academic year. September 30th is the crucial date in terms of the compilation of statistics. In Ireland there is only one start date for children beginning primary school.

Department of Education - Early Start

In June 1994 the Minister for Education announced details of Early Start, the Department of Education's preschool centre project which commenced in September 1994. This preschool programme allowed for the establishment of Early Start centres located in areas designated as disadvantaged. In 1997 there were 40 Early Start centres. The Early Start philosophy views learning as a guided discovery through a series of structured activities, aimed at the harmonious development of the whole child. Self-expression is encouraged through language, music, drama, art and physical education. Language and numeracy skills as well as an appropriate introduction to the Irish language are a priority. Parental involvement is considered to be a key element of the scheme and participation is at the following three levels:

1. Parents are members of an advisory group in each centre.

2. Parents participate in the everyday running and organisation of the centre.

3. Parents can join their children in many of the centres' activities.

Research into the operation of the first eight Early Start Centres will indicate whether all levels of involvement have been achieved (Educational Research Centre, forthcoming). Each Early Start class is staffed by a qualified primary school teacher and a qualified childcare worker. The childcare worker must have a minimum one year qualification in childcare which is certified by a National Council for Vocational Awards or equivalent (equivalence is determined by the Department of Education). Early Start centres were not in operation at the inception of the IEA Preprimary Project.

Department of Education - Other Initiatives

In addition to children attending infant classes of primary schools and the Early Start programme, the Department of Education supports a number of early education projects for young disadvantaged children, for example:

- The Rutland Street Project established in 1969 to cater for 3 to 5-year-olds living in a particularly disadvantaged part of Dublin city.

- The Department also partially funds the developing preschool services for Travellers run by private and voluntary organisations; there are 56 such preschools catering for over 660 preschool children of Traveller families. The Department grant-aids 98% of the costs of tuition and transport.

- In 1990 the Department launched the Home/School Liaison Project which provides full-time locally based coordinators (primary teachers) to groups of schools in areas of particular disadvantage. Though not exclusively concerned with early years experience, the coordinators establish links with preschools and with voluntary and statutory groups in their area.

2.2 Private/Voluntary Sector Provision

Playgroups

Almost 21,000 children attend playgroups throughout Ireland. Eighty-five per cent of these are privately-run home playgroups. Playgroups offer care and education, either on a sessional or full-day basis, to children under school age. The Irish Pre-school Playgroup Association (IPPA) offers local advice about standards and practice to both home and community playgroups. The IPPA has specific expertise in the provision and support of playgroups and, because of the *ad hoc* and rapid nature of the expansion of other early services, is now becoming an adviser to a wider and more varied set of services.

Community Playgroups Together, a voluntary group comprising playgroup leaders advisers and representatives from Dublin Corporation, was set up in November 1995 to support and advise preschools in areas of disadvantage in Dublin.

Parent and Toddler Groups

Parent and Toddler Groups are small informal groups which offer play opportunities for children (usually under 3) and companionship for their parents; they are often linked to other forms of provision, such as schools, playgroups and clinics.

Naíonraí

An Comhchoiste Réamhscolaíochta Teo. organise and support a system of Irish medium playgroups, the Naíonraí. In December 1996, there were 276 naíonraí in the Republic of Ireland catering for approximately 2,800 children (An Comhchoiste Réamhscolaíochta Teo, personal communication, July 1997). As with the playgroups, a proportion of these children would be supported through the Health Boards.

Montessori Schools

There are approximately 140 Montessori schools/preschools in Ireland catering for almost 1,700 children (Hayes, 1992). These provide a part-time preschool service for children aged 3 to 6 using primarily the Montessori Method. A small number of Montessori schools offer education for children through to age 12.

Nurseries/Creches

Nurseries provide group care for children; children from 3 months to school-going age may be in attendance. Such services have developed to meet the needs of children whose parents work outside the home and offer an environment where children are cared for during the day. In July 1997, 250 nurseries, catering for approximately 6,000 children aged between 0 and 6 years, were registered as affiliated members of the National Children's Nurseries Association (NCNA). These nurseries may be private, community-based or workplace nurseries, many of which provide a formal educational component in the form of morning preschool session for the 3 to 5-year-olds. However, it is estimated that the actual number of nurseries in existence in Ireland far exceeds the above figure (NCNA, personal communication, 1997).

Childminders/Family Daycare

Whilst there are no precise figures available, a recent study concludes that childminders and relatives are the most common types of service for children with working parents (Hennessy & Hayes, forthcoming). Childminders care for one or more children, often from 3 months old, in their own homes. They are self-employed and no training is required. Childminders who care for 3 or fewer children are not bound by the Child Care (Pre-school Services) Regulations (Department of Health, 1996).

Playbuses and Toy Libraries

Playbuses are special buses converted to accommodate toys and equipment for a small playgroup or parent and toddler group. The child care agency, Barnardo's, operates two buses in Dublin which serve Traveller children. Toy libraries lend selected toys and equipment. Originally established for parents of

children with special needs, they are now more widely available and some have been set up for childminders and playgroups. Barnardo's also runs toy library services in various parts of Dublin.

2.3 Staff-Child Ratio

Department of Education: Infant Classes

Ireland has the largest pupil-teacher ratio of 28.7:1 at the *preprimary* level when compared with other OECD countries (Hayes, 1992). According to the 1995 INTO discussion document on Early Childhood Education, the average pupil-teacher ratio in educational settings for 4 to 6-year-olds among EU countries is 18.5 (INTO, 1995). Respondents to an INTO survey,[1] which was administered to Junior Infant teachers in preparation for the above document, reported having between 8 and 39 children in their classrooms. Forty-two per cent of these had 26 plus students in their classes, with 3% having class sizes of 36 plus.

More than 50% of primary schools[2] have four or fewer teachers. The management of such small schools necessitates the operation of 'multiclass' classrooms whereby one teacher teaches a class comprising of two or more year groups, depending on the number of teachers in the school. Thus Junior Infant pupils might be sharing a classroom with Senior Infants, 1st class pupils and 2nd class pupils.

A recent governmental initiative aimed at breaking the cycle of educational disadvantage has made provision for adult-child ratios of 1:15 in Junior classes in schools

> *in selected urban and rural areas which have high concentrations of children who are at risk of not reaching their potential in the education system because of their socio-economic backgrounds. (Department of Education, 1997, p.2)*

'Breaking the Cycle', as the above initiative is known, was not in operation at the inception of the IEA Preprimary Project.

Preschool Services

According the recently-implemented Child Care Preschool Services Regulations, the recommended ratio for preschool sessional care is one adult to ten children. Regarding full-day care, the recommended ratios are as follows: for children aged 0 to 1 year, 1:3; for children aged 1 to 3 years, 1:6; and for children aged 3 to 6 years, 1:10 (Department of Health, 1996). The pupil-teacher ratio in Early Start classrooms is two adults to 15 children.

2.4 Training

Department of Education: Infant Classes

In Ireland the majority of 4 to 6-year-olds are taught by qualified primary teachers who have followed a common route of training. Primary teachers hold a three-year B.Ed. degree from one of the following institutions: Mary Immaculate College, Limerick; Carysfort College, Blackrock (no longer in existence), St. Patrick's College, Drumcondra, Dublin; Church of Ireland College of Education, Rathmines, Dublin; Froebel College, Sion Hill, Blackrock, Co. Dublin and Coláiste Mhuire, Marino, Dublin. The B.Ed. degree qualifies teachers to teach children from 4 to 12 years. Some primary teachers may also hold a Post-Graduate Diploma in Education or the older N.T. qualification.

Preschool Services

In Ireland, there is a voluntary register for playgroups and a growing one for nurseries. Statutory regulations of early childhood services have only been recently been implemented, with the result that it is

difficult to assess the level of training and experience of the people involved in the care/education of young children. Thus preschool and playgroup teachers may or may not be formally trained.

The Dublin Institute of Technology (DIT) offers both a Certificate (2 years) and a Diploma (3 years) in Early Childhood Care and Education; both courses are validated by the DIT, entitling graduates to work in preschools, creches, nurseries, in preschools for Travelling children and in the Early Start programme. Playgroup leaders (if they are members of the IPPA) have at least undertaken a 20-hour Introductory Playgroup Course organised and administered by the IPPA themselves. Stiúrthóirí (leaders) in naíonraí will also have followed a training course comprising one full week initial training with one additional weekend element. In 1997, the AMI Montessori graduates who hold the three-year diploma were the only Montessori teachers recognised by the Department of Education but they may teach in special National Schools only, not in mainstream national primary schools (INTO, 1995). The St. Nicholas Montessori College of Education in Dun Laoghaire has recently received NCEA validation for its two year full-time post leaving certificate Diploma.

Further Education colleges offer a Post Leaving Certificate course in childcare to NCVA Level 2, while some Further Education establishments offer the U.K. Nursery Nurses Examination Board courses. FÁS Training and Employment Authority, also provide a 36-week fulltime programme, FÁS Childcare 2. Both these latter programmes are considered by the Department of Education to be equivalent to the NCVA Level 2. University College Cork has offered a B.A. in Early Childhood Studies since 1995. As a result of the developing interest in the area, a number of third level institutions plan to offer post-graduate training in early childhood education from Autumn 1997.

2.5 Curriculum

In planning for an early years curriculum, one ought to take account of principles which have developed from the increased research and knowledge available about the nature of young children's learning and the totality of their needs. A further requirement is the translation of such principles into sound practice. Heaslip (1989) makes the point that

> *The child needs to be considered as a whole, and it is the teacher's responsibility to create a learning environment that is appropriate for her or his development, one that is print rich and language heavy, where curiosity can be cultivated, thinking challenged and competence enhanced. This cannot be done in discrete compartments, learned in subjects, assessed, recorded and transferred onto paper. (p.156)*

The White Paper on Education (Department of Education, 1995) also recognises the importance of appropriate curriculum,

> *Effective curriculum planning and implementation require clear aims and values. They also require well-defined learning objectives and integration of the different activities which contribute to their achievement. Curriculum planning should be a continuing process involving planning, observing, assessment and revision in the light of experience. (p.18)*

Department of Education: Infant Curriculum

In 1997, the only national curriculum affecting children of preschool age was the first sections of the Department of Education, Primary School Curriculum (Curaclam Na Bunscoile, 1971) referring to 4 and 5-year-olds. The principles underlying this curriculum are primarily based upon Piagetian theories of how children think and learn. Infant teachers plan for learning experiences for children predominant-

ly in the areas of language, art, mathematics, environmental studies and physical education. Structured play is seen as important in all aspects of the curriculum. This curriculum is currently under review.

Early Start Curriculum

At the inception of the Early Start project in 1994, staff were presented with a draft outline of a curriculum which was to act as guidelines only. These guidelines were developed as part of the Rutland Street Project (1969-1974), (see Section 1.6). Highlighted in these guidelines were the following areas of development: receptive, expressive and associative language, logical behaviour, physical knowledge, social behaviour, task behaviour, motivation and personality adjustment (INTO, 1995).

2.6 Conclusion

Early Childhood Educational Services in Ireland are characterised by diversity on a variety of levels. Participation in the IEA Preprimary Project presented the opportunity for gathering a much-needed data base on the actual experiences of Irish 4-year-old children both in preschool and school settings.The project examines the 'quality of life' of 4-year-olds by using extensive observational and interview data. It seeks to understand how the educational values and expectations of teachers[3] affect the way they organise the environment for the child and how specific structural features and/or interactional processes of settings, as well as family background factors, affect children's developmental status at age 4.

Summary

- Early Childhood Educational Services in Ireland are provided by both public and private sectors.
- Public sector provision comprises nurseries/centres which are grant-aided by the Health Boards through the Department of Health. The Department of Education has responsibility for Infant classes in primary schools catering for 4 and 5-year-olds, and the Early Start Programme in 40 centres catering for 3 to 4-year-olds.
- Private/Voluntary sector provision comprises a diverse range of preschool services such as playgroups, parent and toddler groups, naíonraí (Irish medium playgroups), Montessori schools, creches, nurseries, childminders and playbuses. Certain community-based services may receive some grant support.
- The Child Care (Pre-school Services) Regulations, 1996 require adherence to minimum standards with regard to safety, premises and facilities and maintenance of records. The regulations do not require that preschool teachers have specific training.
- Primary school teachers follow a common route of training leading to a B.Ed. and, on qualification, teach 4 to 12-year-olds. Staff in preschools follow a variety of training options.
- Infant teachers in primary schools follow the prescribed Department of Education curriculum (1971) which is currently under review.
- There is no national curriculum at the preschool level.

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1 A total of 521 detailed questionnaires were distributed to Junior Infant teachers through their staff representatives in May 1995, as part of the preparation of the INTO document on Early Childhood Education. Two hundred and ninety-five questionnaires were returned, a response rate of 57%. The purpose of the questionnaire was to ascertain the views of teachers of junior infants on issues and concerns in infant education in Ireland.

2 In Ireland, the primary education sector comprises primary schools, special schools and non-aided private primary schools. Primary schools account for the education of 98% of children in the primary schools.

3 Throughout the report, the term 'teacher' is used, to refer to the primary adult responsible for the sample group of children, in preschool and school settings.

CHAPTER 3 | IEA PREPRIMARY PROJECT - METHODOLOGY

The main purpose of the IEA Preprimary Project is to investigate the nature of 4-year-old children's experiences in designated disadvantaged (DD) and non-designated disadvantaged (NDD) preschool and primary school settings in Ireland. In addition, the project describes the teachers and families of the sample of children, the structural features of the settings and examines the expectations of the teachers and parents about the important areas of development for young children. A further aspect of the study is the examination of the developmental status of the sample of 4-year-olds.[1]

This chapter describes the sample, the selection of settings, the instruments and the data collection procedures. It concludes with a brief description of the data processing and analysis.

3.1 The Sample

Children

Three hundred and ninety-six children, 209 boys and 187 girls, participated in the study. These were a sample of children from DD and NDD schools and preschools all over Ireland. The majority of children were aged between 4 years 0 months and 4 years 11 months, although a small number fell outside this range at the time of testing. In line with the population distribution, over one third of the sample came from Dublin. Twenty-two other counties also participated.

Parents

Permission for their children to participate was given by 396 parents.

Approximately 382 parents (in most cases the mother) responded *in full* to the Expectations section of the study (see Section 3.4).

Setting Directors and Teachers

Setting directors and teachers from 109 settings participated in this study, in that they gave permission to data collectors to visit their settings to observe and interview children, staff and parents. In all of these settings, directors and teachers agreed to complete Expectations and Provider survey questionnaires (see Section 3.4).

3.2 Selection of Settings

Setting types were selected on the basis that 20% or more of 4-year-olds in Ireland attended such settings. From the limited data available, two main settings emerged - the preschool services and the junior

Table 3.1 Counties in which Participating Settings were Located.

County	No. of Children	County	No. of Children
Meath	9	Dublin County	32
Kilkenny	4	Offaly	2
Leitrim	4	Mayo	20
Limerick	11	Clare	7
Kildare	12	Galway	10
Monaghan	4	Tipperary	5
Laois	3	Sligo	4
Wicklow	15	Kerry	14
Longford	3	Donegal	13
Louth	23	Cavan	3
Dublin City	108	Cork	61
Wexford	4	Waterford	15

infant classes in primary school. The specific organisations contacted are detailed in Appendix 1. These two types of setting were further divided in terms of designated disadvantaged (DD) status and non-designated disadvantaged (NDD) status. DD school settings were selected according to the criteria laid down by the Department of Education at the time of sample selection. Schools seeking disadvantaged status are assessed and prioritised as to need, on the basis of socio-economic factors such as the number of pupils whose families (a) reside in local authority housing or flat or non-permanent accommodation, (b) hold medical cards and (c) are in receipt of unemployment benefit or assistance.[2] The situation with preschools was more complex and a decision was made to draw the sample from preschools reporting receipt of any level of State funding.

- NDD Schools

Data was received from the Department of Education and contained details of all the National Schools in the State (1992). The total number of schools was 3,223. Random sample selection was made using this list. As the list given included all National Schools a small number of the initial selection were, in fact, disadvantaged (found in the next sample cell), senior or special schools (which were deliberately excluded from the project). Where this occurred, and where a selected school was unable or unwilling to participate, the next school was selected. Twenty-eight schools were selected in total.

- DD Schools

A list of all DD schools was received from the Department of Education, the total numbering 258. Twenty-seven schools were randomly selected.

- NDD Preschools

As no centralised data existed at the time of sample selection with regard to preschools in Ireland, the data used for selecting preschool settings was made up from material received from the Association of Montessori Ireland (AMI) Montessori directory, An Comhchoiste Réamhscolaíochta Teo., the Irish Preschool Playgroups Association (IPPA) and St. Nicholas Montessori Society. The total entry in the Preschool file was 1,748. If preschools did not have any 4-year-olds attending, or were unable or unwilling to participate, then the next preschool on the list was contacted. Twenty-five NDD preschools participated in the study.

- DD Preschools

The final data file in this group was made up from those preschools throughout the state that received grant aid in 1992/93 through either the Department of Health, the Department of Social Welfare or the Department of Education. In total the file contained 357 entries. If preschools did not have any 4-year-olds in attendance, or were unable or unwilling to participate, then the next preschool on the list was contacted. In general, children attending such preschools would be selected as being particularly at risk as a result of a variety of factors which may relate to developmental problems and/or family background. In total 29 DD preschools participated in the study.

A detailed description of the sampling procedure for each cell is provided in Appendix 2.

3.3 Achieving the Sample

A list of eligible children in any particular class was given to each data collector at the beginning of Day 1 of data collection; this list may have been in alphabetical order but could have had no particular order. Computer-generated random numbers were used in order to obtain the sample of children in each of these settings. Each 'eligible' child was numbered '1' to 'n'. The random numbers were used to generate a whole number within the range of available children and it was the children with the randomly-selected whole number who became

Table 3.2 The Sample

	Number of settings	Number of children
NDD School	28	101
DD School	27	102
NDD Preschool	25	90
DD Preschool	29	103
Total	109	396

the sample. It was planned to randomly select four children per setting and to have approximately equal numbers of settings and children per cell. However, when fewer than four 4-year-olds were present in any setting, it was necessary to find additional settings until the required number in each cell was attained.

The preschool cells proved the hardest to fill. This was partly due to the issue of entry date for 4-year-olds to primary schools (see Section 2.1). Hence, in September of 1994 in particular, it was difficult to find 4-year-olds in preschools.[3]

3.4 Measurement Instruments

The set of measures used for data collection in the IEA Preprimary Project included three questionnaires/surveys, three observation systems and five child developmental status measures. These instruments were designed by the National Research Committees under the direction of the International Coordinating Committee of the IEA Preprimary Project and piloted prior to use in the project. Ireland was not part of the project at this stage and therefore was not part of the international piloting of the instruments. The 11 instruments are each briefly described below.

Provider Surveys

A Provider Survey (director) was administered to the preschool supervisors and school principals. This questionnaire examined the setting under the following headings:

- physical description
- management
- patterns of operation
- availability of ancillary services and outside resources
- parent involvement.

A Provider Survey (teacher) was administered to the teacher who worked with the sample at each of the settings. This questionnaire examined the following:

- teacher characteristics
- enrolment characteristics
- materials and equipment available

(see Section 5.2 for more details of the Provider Surveys).

Parent Interview

Parents were administered a Family Background Interview which examined the following areas:

- child's present caretaking situation
- household description
- family background details

(see Section 4.2 for more details of Family Background Interview).

Expectations Questionnaire

This instrument explored teachers' and parents' beliefs about which areas of development are important for 4-year-old children. The members of each group (i.e. teachers and parents) were also asked to predict which areas the other group would identify as important and which areas they considered their responsibility.

(see Section 6.2 for further details of the Expectations Questionnaire).

Observation Systems

Three separate observation systems were developed to gather information on the following:

- child activities (activities and interactions of each target child in a given setting)
- adult behaviour (general behaviours of the teacher/caregiver, the specific behaviours directed towards each target child, and the nature of the adult's general involvement with the children)
- management of time (how the adult organised the children's time in the setting)

(see Section 7.2 for more details of Observation Systems).

Child Development Status Measures

The child's development status measures were administered to the target children in each setting and assessed the children's performance in the following areas:

- cognitive development (included spatial relations, quantity and time)
- language development (verbal skills)
- fine motor skills (small muscle co-ordination)
- social competence (social skills and social thinking)
- preacademic skills (number, prewriting, and prereading)

(see Section 8.2 for more details).

3.5 Data Collection

Training of Data Collectors

Data collectors were primarily from Social Sciences, Education and Early Years backgrounds; some were trained in primary school teaching, some provided preschool services, most were students pursuing or having recently completed post-graduate degrees. They were sourced in a variety of ways. While most were contacted via the colleges and universities they were attending, 'word of mouth' also ensured applications. Some voluntary agencies - for instance the IPPA - also provided data collectors. Initial data training sessions were held in Cork, Dublin and Galway in February to April 1994, (one session in Cork and Galway and two in Dublin). Subsequent sessions were held in Autumn 1994.

The project team trained small groups of students using project materials and practice sessions for each measure. Training sessions lasted two to two-and-a-half days. They included studying the instruments, learning observation techniques through viewing videotapes and demonstrations, and practising the data collection procedures. On the observation schedules, data collectors achieved a 75%-80% inter-observer reliability in training sessions. The project team monitored the data collection closely. In all, 42 people were involved in data collection, 32 women and 10 men.

Procedure

Each data collector visited each setting for a minimum of three to four days if there were four target children in attendance, and a minimum of two to three days if there were only two or three target children in attendance. Observations took place on two non-consecutive days and took between three and three-and-a-half hours each day. Child development assessment tests were usually carried out on the second and fourth days and parents, principals/supervisors and teachers were interviewed at free periods throughout these three to four days. Data collection took place between March 1994 and June 1995.

3.6 Analysis of Results

All the data collected (provider director and teacher questionnaires, parent and teacher expectations, family background, observations and assessments) for each target child at each setting was coded by data collectors according to IEA Preprimary Project guidelines contained in comprehensive coding manuals.[4] For example, NDD preschools were labelled using numbers in the '100s' range, DD preschools were given numbers in the '200s' range etc. Hence, settings could be distinguished in terms of whether they were preschools or schools and whether they had been designated as having disadvantaged status or not. Each target child was also given a unique ID number. This system will allow for cross-referencing when the children are revisited at age 7 in 1997/98.

Codes were checked by the research team and then entered on a specially formatted diskette and sent to the IEA Preprimary Project headquarters in Michigan, United States for inclusion with the total data set from all participating countries. Copies were retained for data analysis in Ireland. It was decided to analyse the Irish data using a statistical package called Data Desk (version 5.0.1, 1995) which runs on any Macintosh computer (see Appendix 3 for further details of computer analysis procedures). The findings of the IEA Preprimary Project are presented in Chapters 4 to 8 which follow. Details of statistical analyses used are to be found in the findings section of each Chapter.

Summary

- Three hundred and ninety-six children, 209 boys and 187 girls, in 109 settings participated in the study.
- The sample was randomly selected from a population of 4-year-olds in designated disadvantaged and non-designated disadvantaged schools and preschools all over Ireland.
- The 11 measurement instruments of the project comprised three questionnaires, three observation systems and five child development status measures.
- Data was collected by trained data collectors between March 1994 and June 1995.

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1 The project team would like to thank the Department of Education, the Dublin Institute of Technology and The Combat Poverty Agency for their support.

2 The recent governmental initiative to combat educational disadvantage, Breaking the Cycle, has refined the designation of disadvantage and included such factors as the level of unemployment, the education levels of parents and number of one-parent households in its criteria for designating schools disadvantaged. Furthermore, a distinction has been made between small rural schools and large urban schools, with factors relating to farm incomes in addition to the above criteria being included for the assessment of rural schools.

3 The project team regret that no Irish speaking group (naíonraí or junior infant classes in Gaelscoileanna) was, in fact, included in the sample. Some emerged from random sampling and data collectors were trained to collect data in such settings, however, none were able to participate.

4 More details on coding are available from the Early Childhood Research Centre, School of Social Sciences, Dublin Institute of Technology, 143-149 Lr. Rathmines Rd., Dublin 6.

CHAPTER 4 | THE FAMILIES IN THE IEA PREPRIMARY PROJECT

It is difficult to consider early childhood education without looking at the child in the context of his/her family. The family plays a critical role in the daily life of a young child. Most young children spend more time in the family environment than in any other setting and it is the parent(s) who provide for the basic needs of the child - both physical,material and emotional.

This chapter provides a description of the families of the children who took part in the IEA Preprimary Project. It begins with a review of the issues relating to the influence of family background variables on developmental status, with particular reference to the situation in Ireland. The next section describes the questionnaire used for obtaining family-related information. The findings which follow provide a picture of the family environments of the sample children.

4.1 Literature Review

By age four, most children will have acquired gross motor skills involved in walking and running, and fine motor skills needed for instance, for painting, drawing and construction play with building blocks. Socially, children will have developed to the extent that they can share and play with others and linguistically they will probably have learned to speak a language fluently. There are certain recognised basic conditions to be met in order that such developments can take place, namely: a caring emotional environment; nutritional and health care; attention from adults; psychological stimulation and a network of interpersonal relationships that are characterised by intensity, intimacy and continuity over time (Kellaghan, Sloane, Alvarez & Bloom, 1993).

Traditionally, there has been an attempt to establish a relationship between certain structural variables such as family structure (i.e. household composition) parental educational level, employment status and developmental status and later school achievement (see White, 1982 for a meta-analysis of 101 studies). While a relationship, albeit a weak one, at the individual student level has been proven, our knowledge of exactly how this process works is still unclear.

Another approach has been to investigate *home processes* in explaining the link between family background and school achievement (Rutter, 1985; Bronfenbrenner, 1986; Kellaghan et al., 1993). Such home processes would include how time and space are organised and used, how parents and children interact and spend their time, and the values that govern parents' and children's choice of activities. Another home process would be parental expectations for the child. These process variables do not act independently of the family structural variables cited above. For example, parents' interest in their children's learning, their expectations of a preschool or school and their belief in the value of schooling stem from their own level of education.

In the following sections we look particularly at the issues surrounding the family variables which were included in the analytical model of the IEA Preprimary Project, namely: family structure, parental education, parents' occupation and household income. Parents' expectations are discussed in Chapter 6.

Family Structure - One-Parent Families

In discussing household composition, cognisance needs to be taken of the changing patterns of family structures in recent decades. For example, increasing participation of women in the labour-force, and the declining rate of marriage and instability of marriages have resulted in an increase in the numbers of one-parent families both in Ireland and in other western countries. Lone parenthood i.e. families with one or more children, but only one parent, usually the mother, has in fact become a focus of interest in the debate on the effects of family factors on children's developmental status and achievement.

Concern for children in one- parent families is not because children cannot function perfectly well with only one parent - but because lone parenthood in our society is linked to a high risk of severe material disadvantage (Madge, 1983).

For example, in a report based on official statistics, administrative statistics and a review of existing research studies, Millar, Leeper, and Davies (1992) state that there are at least 40,000 lone-parent families in Ireland, comprising 10% of all families with children under 15 years ('lone-parents' were taken to include unmarried mothers, separated women and men, widows and widowers bringing up children, or parents not cohabiting with a partner).The vast majority of these lone-parent families are headed by women. The Millar et al. report highlights some of the reasons why lone-parent families in Ireland are a particularly high-risk category in terms of poverty. Firstly, only 25% of lone mothers who are household heads receive an income from employment. Secondly, maintenance from former partners is not a significant source of income for lone parents. Thirdly, lone mothers are less likely to be employed if they have preschool age children (see also Flanagan, 1996).The situation regarding inadequate provision of affordable and accessible child care in Ireland means that for many, employment is not an option. It has recently been estimated that 25% of babies in Ireland are born to single women (Central Statistics Office, 1996b).

In 1993, Moss noted that the three countries in the EU with the lowest level of childcare provision, Ireland, the United Kingdom and the Netherlands, were also the only three countries in the EU where lone mothers are less likely to be employed than couple mothers. Thus it would appear that in Ireland, children in lone-parent families, especially those headed by women, are particularly vulnerable in terms of poverty.

Size of Family and Birth Order

Kellaghan et al. (1993), reviewing research on the relationship between family size and school achievement, report a consistent finding of a negative relationship between family size and measured abilities and achievements. However, they note that family size, which directly reflects the amount of attention available for children, is more likely to affect verbal ability and achievement in families in which the father has a low occupational level than in families in which the father has a high occupational level. Research on the relationship between birth order and school performance has yielded inconsistent conclusions. Birth order, of course, is related to family size - for example it is likely that parents have less time to spend with each individual child as each successive child is born. Furthermore, children in different ordinal positions may be treated differently by parents because of their position (Kellaghan et al., 1993. See also Stewart & Stewart for bibliography of research on birth order, 1994).

Parental Education

According to Bronfenbrenner (1986), level of parental education can be of influence in two ways; firstly, it provides an index of social background, separately, for each parent, that is unlikely to be influenced by subsequent family processes. Secondly, education appears to be an important source for parents' conceptions of the nature and capacities both of the child and of the parent at successive stages of the child's life.

Research cited by Kellaghan,Weir, Ó hUallacháin and Morgan (1995) indicates that recent studies including the National Reading Survey (1993) in Ireland have shown mother's education to be more closely related to children's achievement than father's level of education and also to be the best single socio-economic predictor of student performance.

Interestingly, Kellaghan et al. (1993), reviewing the research on parental characteristics, report that parents' attitudes to education, their interest in their children's education, and their beliefs in the value of

schooling have been found to be related to measures of children's scholastic behaviour, and furthermore, these parental characteristics have been found to be more important than the actual material circumstances of homes.

Parental Employment

Families in which both parents work are becoming increasingly common as the numbers of women in the labour force in Ireland increases. Thirty-five per cent of women in Ireland aged 15 and over were in the labour force in 1993, the year the IEA Preprimary Project commenced: subsequently this figure has increased to 39% (Labour Force Survey, Central Statistics Office, 1996a) and 25% of mothers whose youngest child is 3-9 years are currently in employment (Department of Equality and Law Reform, 1994).

Whilst an apparently obvious result of both parents working is greater material benefit for a family, it would appear from the research that there are many factors that need to be considered when attempting to determine whether maternal work in particular, has an effect on the development of children. Kellaghan et al. (1993), in reviewing the research, cite the following factors:

> *...the age of the child when the mother is working outside the family, the amount of time she spends outside the home, her educational level, the child's gender and temperament, characteristics of the child's family (structure, income and support system) maternal-role satisfaction, father involvement, the quality of family interactions and the availability, type, and quality of arrangements to look after the child in the mother's absence. (p.74)*

Bronfenbrenner (1986), in an article which examines the family as a context for human development, refers to the notable lack of studies examining the developmental impact of the joint employment patterns of father and mother and in particular the conflict between the work schedules of the two parents, and the "hecticness" it may generate in their lives as these conditions affect the intensity and quality of parent-child interaction. A second omission is the failure to include within the same research design provision for investigating both links in the presumed causal chain: (a) the influence of parental employment on parental functioning and (b) the effect of the induced change in family processes on the behaviour and development of the child.

Unemployment, Poverty and Family Income

The question of the effects of unemployment on children is a pertinent one in Irish society where unemployment rates are high in relation to other developed countries. Furthermore, levels of unemployment, poverty, parents' education and family income are interrelating variables and need to be considered as such when looking at their effects on children's developmental status. For example, in 1993, an OECD report stated that unemployment in Ireland is disproportionately concentrated amongst those with the lowest levels of educational achievement in Ireland. Furthermore, results of a major study of poverty in Ireland found that households headed by an unemployed person were the largest group in poverty, representing about one third of all households in poverty at the 50% income line[1] and also faced the greatest risk of poverty (Callan, Nolan, Whelan, B., Whelan, C., & Williams, 1996). In relation to children specifically, this same study found that children continue to face a higher risk[2] of poverty than adults - the risk for children was almost 30% at the 50 per cent line, and over 40% at the 60 per cent line - for adults the corresponding risks were 18% and 32%. These results would seem to support the well- documented cycle of deprivation that exists in contemporary Irish society among those who are most deprived (CMRS, 1992; Kellaghan et al., 1995; Callan et al., 1996).

The Cumulative Effects of Problematic Circumstances

At the beginning of this review of the issues surrounding family background variables, reference was made to the basic conditions that are required if a young child is to develop physically, socially and intellectually. Although children are highly variable in their needs for certain experiences, when these basic conditions are not being met a child could be considered to be *at risk*. The findings of an eleven-year longitudinal study in New Zealand which examined the relationship between social background and childhood problems concluded that while social factors such as family social position, income levels and material conditions were only weakly related to specific outcomes (e.g. educational achievement, health problems) these factors act as relatively strong determinants of the child's level of vulnerability to problems (Fergusson, Horwood & Lawton, 1990). Thus, it is the cumulative effect of factors such as poverty, parental unemployment, poor health, low school attendance that places a child at risk in terms of low developmental status and later school achievement, as not only are these factors debilitating in their own right but as Madge (1983) points out, "they affect a family's ability to cope generally and the style and manner in which children are raised and socialised" (p.205).

Finally, it is worth commenting on the resilient nature of young children in the face of hardship. Madge (1983) refers to the fact that

> *...some children may grow up seemingly unscathed by their background, while deprivation may arise quite spontaneously, and without earlier precedent, in other families. (p.201)*

In conclusion, it would seem from the research that while it is acknowledged that family characteristics play a central role in influencing developmental status and later school achievement, exactly how this process works is still unclear. The presence of certain family background factors would seem to place a child at greater risk of lower developmental status and later lower school achievement, e.g. being poor, being part of a single parent family, being part of a large family. These factors are interlinked. Interestingly, however, recent literature identifies family process variables or home processes as being more important in determining children's scholastic behaviour than structural variables (Kellaghan et al., 1993). The IEA Preprimary Project aimed to provide a detailed description of the sample families both in terms of the more conventional indicators of family background and structure and also in examining parental expectations of early childhood education. The developmental status of the sample children at 4 is examined in Chapter 8. In the following sections we give details of data collection and findings.

4.2 Survey Instrument and Data Collection

During the three to four days of data collection, the Family Background Interview was administered to a parent/guardian (more usually the mother) of each sample child. It examined the following areas:

- child's present caretaking situation
- household description
- family background details.

Three hundred and eighty-six families of the total sample of 396 children answered some or all of the interviewer's questions (see Section 3.1 for sample details).

Firstly, the respondent was asked a number of questions about the child's present caretaking situation. For example, the number of hours per week cared for (i.e. in school or preschool), and the month and year when that care started. These findings are presented in Chapter 5.

Secondly, the respondent was asked a number of questions about the household make-up. For example, the total number of people living in the house, their ages, the chronological placement of the target child in the household. Whether the household had running water, a refrigerator, a working television, a dictionary, were other questions asked.

Finally, the respondent was asked to provide information about the family. For example, the educational and occupational level of the parents/guardians was required, whether they were married and living together, and the source and amount of yearly incomes.

In analysing the data, linear models were used to identify factors which were associated with outcome variables. Setting was analysed as two variables: school type (primary or preschool) and the presence or absence of disadvantage as determined by whether or not the setting was designated disadvantaged (see Section 3.2). This approach allowed us to test for interaction effects - that is, outcomes where the effects of both factors acting together was significantly different to the effect expected by analysing each factor alone.

4.3 Findings

4.3.1 Family Structure

Household size

Table 4.1 presents information about the household size of the families participating in the IEA Preprimary Project. Household sizes ranged from 2 to 17 members for the families in the DD setting groups and from 2 to 12 in the NDD setting groups. Analysis of the linear model indicated no significant differences between settings in terms of disadvantaged status (F=.62, P=.43) and no significant differences between school and preschool settings (F=.48, P=.49). Furthermore, there were no significant interactions (F=.39, P=.53) i.e. the effect of disadvantage was uniform over both types of setting. Thus, while there was great variability in the numbers of occupants in individual families, mean household sizes across all setting types were similar.

Table 4.1 Household Size and Birth Order of Children in Preschools and Schools.

	DD Pre (N=100)	DD Sch (N=101)	NDD Pre (N=88)	NDD Sch (N=97)
Household size (no. of persons)				
Mean	5.1	5.0	4.6	4.9
Median	5	5	4	5
S.D.	2.1	1.6	1.4	1.9
Minimum	2	2	2	2
Maximum	17	10	12	8
Birth Order				
% first-born	31	36	48	32
% second-born	29	28	21	26
% third-born	17	19	13	16
% fourth-born	10	9	11	13
% fifth-born	5	2	2	6
% sixth-born	4	3	2	2
% seventh-thirteenth born	2	3	1	0

Birth order

Table 4.1 also presents the birth order of the child in his/her family. Our findings indicate that although 38% of the children overall were first-born children and 63% were first or second-born, 35% had two or more siblings (i.e. are third-born or higher). Looking at the setting types individually, we find that more children attending NDD preschools were first born (48%) than children attending any other setting type.

Marital status of respondents

Table 4.2 presents information about the family structures of the families participating in the study. Whilst respondents were asked to describe in detail their marital status, there were a few discrepancies in the data which may be accounted for by the private nature of the information being sought and also by the fact that social welfare payments and income tax are affected by whether or not one is living with a partner. The majority of mothers who responded to this item indicated that they were married and living with their spouse (85%). Of those who had never been married, more were mothers of children attending DD settings than NDD settings (17% as compared to 4%). The number of children living in one-parent and two-parent families was also of interest. While a number of respondents who were unmarried indicated that they were living with a partner (16 in total) there was no way of ascertaining the stability of such relationships in terms of classifying those families as 'two-parent families'. Furthermore, of those respondents who were unmarried, 5% refused to respond to the question of whether or not they were living with a partner. Nevertheless, the findings indicate that a greater proportion of children attending DD settings were living in one-parent families than children attending NDD settings.

Table 4.2 Percentages of Families of Various Structures

Family Structure	DD Pre (N=100)	DD Sch (N=100)	NDD Pre (N=89)	NDD Sch (N=97)
Two-parent families				
Married & living with spouse	76.0%	82.0%	93.5%	88.7%
Other structures				
Separated	4.0%	4.0%	2.2%	5.2%
Widowed	1.0%	0%	0%	1.0%
Never married	19.0%	15.0%	4.5%	4.1%

4.3.2 Parental Education and Employment

Number of years of full-time education: mother

Table 4.3 below presents information about the education of the mothers of the sample children. Our findings indicate that mothers of children attending DD settings had two years fewer full-time education than mothers of children attending NDD settings (11 years on average compared to 13). Linear model analysis indicated no significant differences between preschool and school settings ($F=.88$, $P=.35$), but significant differences between DD and NDD settings ($F=58.2$, $P \leq 0.0001$). There were no significant interactions ($F=.08$, $P=.77$) i.e. the effect of disadvantage was uniform over both types of settings (preschool and school).

Table 4.3 Number of Years of Full-time Education: Mother

	DD Pre (N=96)	DD Sch (N=99)	NDD Pre (N=88)	NDD Sch (N=97)
Mean	11.4	11.1	13.6	13.2
S.D.	3.3	2.3	2.5	2.9
Minimum	0	8	8	6
Maximum	19	19	20	21

Employment Status and Occupational Level of Mothers

Sixty per cent of mothers overall who responded to this item were not in paid employment[3] (235 out of a total of 386 responses). Comparing mothers of children attending DD settings and mothers of children attending NDD settings, 73% of the former and 48% of the latter were not in paid employment. The highest level of mothers not in paid employment was found amongst mothers of children attending DD preschools.

Table 4.4 Mother's Employment Status and Occupational Level

	DD Pre (N=100)	DD Sch (N=100)	NDD Pre (N=89)	NDD Sch (N=97)
Not in paid employment	81.0%	65.0%	48.3%	47.4%
Professional/ Managerial	7.0%	10.0%	30.3%	16.5%
Clerical/Sales	2.0%	7.0%	3.5%	14.4 %
Semi-skilled	5.0%	6.0%	3.4%	0.3%
Unskilled	5.0%	12.0%	4.5%	1.3%

When those mothers who were not in paid employment and the number of non-responses (nine) were excluded from calculations, it was possible to find the percentage of people in the following occupational levels.

Table 4.5 Mother's Occupational Level if Working

Occupation level	DD Pre (N=19)	DD Sch (N=35)	NDD Pre (N=46)	NDD Sch (N=51)
Professional/ Managerial	36.8%	28.6%	58.7%	31.4%
Clerical/Sales	10.5%	20.0%	26.1%	27.5%
Semi-skilled	26.3%	17.1%	6.5%	19.6%
Unskilled	26.3%	34.3%	8.7%	21.6%

Higher percentages of NDD setting mothers were in the professional/managerial category (45% vs. 33%) and in the unskilled category the reverse was true (15% vs. 30%). Twenty-two per cent of mothers of children in DD settings were in the semi-skilled category, whilst 13% of mothers of children attending NDD settings were in this category. For a complete breakdown of job titles/occupations of mothers see Appendix 4.

Number of years of full-time education: father

As was the case with mothers, the fathers of children attending DD settings reported having completed less years of full-time education than did fathers of children attending NDD settings (11 years on average compared to 13) (see Table 4.6 below). Analysis of the linear model indicated no significant dif-

ferences between preschool and school settings (F=2.4, P=.12), but significant differences between DD and NDD settings (F=37.4, P≤ 0.0001). There were no significant interactions (F=.41, P=.52).

Table 4.6 Number of Years of Full-time Education: Father

	DD Pre (N=81)	DD Sch (N=89)	NDD Pre (N=85)	NDD Sch (N=88)
Mean	11.0	10.7	13.3	12.6
S.D.	3.6	2.3	3.4	3.1
Minimum	0	7	0	8
Maximum	20	19	21	19

Employment Status and Occupational Level of Fathers

Twenty-seven per cent of fathers overall were not in paid employment. Comparing fathers of children attending DD settings and fathers attending NDD settings, 37% of the former were unemployed and 17% of the latter. Fathers of children attending DD preschools had the highest level of unemployment at 44%.

Table 4.7 Father's Employment Status and Occupational Level

	DD Pre (N= 98)	DD Sch (N=100)	NDD Pre (N=89)	NDD Sch (N=95)
Unemployed	43.9%	30.0%	15.7%	17.9%
Professional/Managerial	18.4%	17.0%	39.3%	35.7%
Clerical/Sales	2.0%	5.0%	11.2%	3.2%
Semi-skilled	30.6%	31.0%	27.0%	35.8%
Unskilled	5.1%	17.0%	6.7%	7.4%

When those fathers who were not in paid employment and the number of non-responses (thirteen) were excluded from analyses, it was possible to find the percentage of fathers working in each of the occupational levels. The findings, presented in Table 4.8, indicate that higher percentages of NDD fathers were in the professional/managerial category (45% vs. 29%) and in the semi-skilled category the reverse was true (38% vs. 49%). Eleven per cent of fathers of children attending DD settings were in the unskilled category, whilst 7% of fathers of children attending DD settings were categorised as being unskilled. For a complete breakdown of job titles/occupations of fathers, see Appendix 4.

Table 4.8 Father's Occupational Level

	DD Pre (N=55)	DD Sch (N=70)	NDD Pre (N=75)	NDD (N=78)
Professional/Managerial	32.7%	24.3%	46.7%	43.6%
Clerical/Sales	3.6%	7.1%	3.3%	3.9%
Semi-skilled	54.5%	44.3%	32.0%	43.6%
Unskilled	9.1%	24.3%	8.0%	9.0%

4.3.3 Family Income Levels and Material Conditions

Family Income

Table 4.9 Annual Family Income Before Taxes: Summary Statistics

	DD Pre (N=76)	DD Sch (N=87)	NDD Pre (N=65)	NDD Sch (N=90)
Geometric Mean	£10,500	£11,500	£17,500	£15,000
Minimum	£4,000	£4,400	£6,000	£4,000
Maximum	£48,500	£50,000	£50,000	£50,000

The geometric mean was used instead of the arithmetic mean because the data was very skewed. Minimum and maximum values were derived from untransformed data. Figures have been rounded to the nearest £500.

It is worth noting that 77 respondents (20%) declined to provide information relating to income. Analysis of the linear model revealed no significant differences between preschool and school settings ($F=0.00037$, $P=0.9847$) but significant differences between DD and NDD settings ($F=32.23$, $P \leq 0.0001$). The mean income of families who responded in DD settings was £11,000, in NDD settings it was £16,250. Interestingly, the range of incomes in each type of setting was similar. The maximum value stood at £50,000 in three types of setting - NDD and DD schools and NDD preschools: the maximum income in the DD preschool setting was £52,500.

Material Conditions

Information regarding various material conditions of the home was also sought. Families were asked if their homes had a private kitchen, running water and an indoor toilet. They were also asked if they had a working car, television, telephone, washing machine, refrigerator and a dictionary in their homes. Percentages of 'yes' replies for three of these items are presented in Table 4.10.

Table 4.10 Material Conditions of the Home: % of 'Yes' Replies

	DD Pre (N=100)	DD Sch (N=101)	NDD Pre (N=89)	NDD Sch (N=97)
Availability of running water	87%	99%	98%	96%
Access to television	97%	99%	99%	96%
Access to a dictionary	64%	79%	89%	89%

Nearly all settings had access to running water, although the fact that 13% of families of children in DD preschool settings reported not having access to running water is noteworthy. This result may be accounted for by the fact that 14 (3.5%) of the total sample of 396 children were Travellers living in the main in caravans and moving around the country. Practically all families had access to a television. While Kellaghan et al. (1993) refer to the finding that children in disadvantaged families spend more time watching television than children from more affluent homes, there was no information on television viewing patterns of children in the present study.

Fewer families in DD settings than in NDD settings reported having a dictionary in their home. This finding is interesting in the light of the results of the 1993 National Reading Survey. It was found that the number of books in the home and number of books owned by pupils correlated highly with school achievement. It could be argued, for instance, that the presence of a dictionary may be an indicator of reading material in the home. On the other hand, it is worth noting that a dictionary is a prescribed text for most middle and senior primary class pupils, and since 35% of the sample had two or more siblings, it is possible that the reported dictionary in the home was a prescribed school textbook rather than family reading material.

4.4 Discussion

Looking at parental education, employment status, income measures and family structure factors cumulatively, which were found by Fergusson et al. (1990) to be relatively strong determinants of a child's level of vulnerability to problems, our findings indicate that children attending DD settings, and particularly those attending DD preschools, would be at risk in terms of low developmental status and school achievement. The profile of the families in the DD preschool category is as follows: Parents of children attending DD preschools had two years fewer full-time education than parents in NDD settings. Eighty-one per cent of mothers were not in paid employment (48% in NDD settings) and 44% of fathers (17% in NDD settings). The average annual income of families in DD preschools was £10,500 - in NDD settings this figure was £16,000. Finally, 19% of mothers in DD settings never married (4% in NDD settings) and 5% were separated or widowed (4% in NDD settings). Whether or not this evidence of vulnerability is evident in the developmental status measures of the children will be investigated in Chapter 8 and again when we follow up the sample at age 7 years.

It is important to interpret the findings of this chapter within the framework of the complete conceptual model of the IEA Preprimary Project (see Figure 1.1). Family background characteristics are only one of a number of interlinked factors in determining children's developmental status. The following chapters address further factors such as setting characteristics, teacher characteristics, expectations and classroom behaviours.

Summary

- The mean number of occupants per household of children attending NDD settings was 4.8; in the families attending DD settings it was 5.1. Overall the actual number of occupants in individual households showed great variability, ranging from 2 to 17.
- Eighty-five per cent of mothers overall indicated that they were married and living with their spouse. Of those who were never married, more were mothers of children attending DD settings than NDD settings (17% as compared to 4%).
- Mothers and fathers of children attending DD settings had 2 years fewer full-time education than the parents of children attending NDD settings.
- Levels of unemployment were higher among parents of children in DD settings. Seventy per cent of mothers in DD settings were not in paid employment as compared to 48% of mothers in NDD settings. Thirty-seven per cent of fathers in DD settings were not in paid employment. In NDD settings this figure was 17%.
- The mean level of income was significantly lower in families of children attending DD settings than in the families of children in NDD settings. However, the range of income in each type of setting was similar.
- While practically all families had access to a television in the home, children attending DD settings were less likely to have a dictionary in the home than children attending NDD settings.

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1 This study was based on the Living in Ireland survey conducted in 1994 by the Economic and Social Research Institute. Relative income lines in the study are based on percentages of average household income i.e. those who fall below 40, 50 per cent or 60 per cent of average household income.

2 The risk of poverty measures the proportion of a group which falls below an income line providing an assessment of the degree to which that group is at risk of poverty.

3 This figure does not necessarily represent the percentage of women who were experiencing enforced unemployment. Included in this figure would be the number of women who had chosen not to work for a variety of reasons, for example preferring to be at home while their children were young. For others, the lack of affordable child care may have determined whether or not they stayed at home - this needs further study.

CHAPTER 5 | STRUCTURAL CHARACTERISTICS OF THE SETTINGS

The characteristics of a setting are crucial to the quality of provision (Dowling, 1988). This chapter focuses on the structural characteristics of the four types of settings identified for the Irish study: non-designated disadvantaged (NDD) preschools, designated disadvantaged (DD) preschools, non-designated disadvantaged (NDD) schools and designated disadvantaged (DD) schools. Specific features looked at include: teacher characteristics, group size, adult-child ratios, patterns of operation, equipment/resources, physical setting, records and evaluation.

While it is acknowledged that structural and process variables (e.g. curriculum employed, behaviour of staff, adult-child interactions) are interlinked (Howes, Phillips & Whitebook, 1992) and indeed this is a presupposition of the project, this chapter looks only at the structural features of the settings. It is intended that the interactional impact of structural and process variables will be reported on in a future article/report.

The chapter begins with a literature review which highlights key research issues and findings. The second section describes the Survey Instrument and outlines the structural characteristics being examined. In the third section findings are presented and discussed.

5.1 Literature Review

Teacher characteristics

The findings of recent research on the quality of provision support the view of the teacher as one of the key resources in an early childhood setting. For example, Dunn (1993), in a study conducted with 60 children in 30 day care classrooms in 24 centres, found that a well-trained caregiver can make an important difference to children's day care experiences. That is, even when ratios and group sizes were found to be poor, a well-trained caregiver could shield children from the potential harmful effects of these conditions. 'Well-trained' in this study referred to the level of education of caregivers, i.e. whether they had had training specifically related to child care at a post high-school or college level.

One of the findings of the National Child Care Staffing Study, a major U.S. study which examined 227 child care centres, was that teaching staff provided more sensitive and appropriate caregiving if they completed more years of formal education, received early childhood training at the college level and earned higher wages and better benefits (Whitebook, Howes & Phillips, 1989).

With regard to defining the role of an educator of young children, Hevey and Curtis (1996), as part of a discussion on the training of early years workers, have compiled a comprehensive list of desired qualities in an early years teacher. The list is divided into three categories, personal/social skills, professional skills and practical skills:

Personal /social skills

S/he should be:

- *A well-adjusted person with a positive self-image.*
- *A well-educated person with wide interests in the arts and an awareness of the physical world.*
- *Aware of and sensitive to the needs of others at all levels, regardless of cultural and social patterns.*
- *Committed, non-judgemental.*
- *Interested in and respectful of the autonomy of the child.*
- *Of an enquiring mind and alert to the need for further personal professional development.*
- *Be able to communicate by all possible means with colleagues, parents, other agencies and above all children, irrespective of their culture, religion or gender.*

Professional skills

S/he should have:

- *A sound knowledge of child development and educational theory.*
- *Ability to develop strategies to transmit knowledge to others.*
- *A deep understanding of the subjects in the early years curriculum and the value of play.*
- *A knowledge of and respect for cultural and social similarities and differences.*
- *Observational skills and ability to assess and evaluate not only the programmes they offer and the children's progress, but also themselves.*
- *A knowledge of the laws relating to families.*
- *A knowledge of policies and their underlying philosophy.*
- *Ability to act as an advocate for children.*

Practical skills

S/he should be able to:

- *Plan programmes which ensure both continuity and progression.*
- *Understand the point of view of others in order to manage the delivery of the programme in various settings with a range of people both professional and non-professional.*
- *Encourage the team of workers to adopt common strategies, which will allow the aims of the preschool to be met.*
- *Encourage the personal development of team members. (Hevey & Curtis, 1996, pp 225 - 226)*

While these qualities have been compiled with a British context in mind, they are relevant when considering an appropriate training for an early years worker in any educational setting.

Group size and adult-child ratio

A further focus of research interest regarding setting characteristics has been the issues of group size and adult-child ratio, two distinct but related features of a setting (see also Finn & Achilles, 1990). One element of the National Child Care Staffing study referred to above, was the examination of the different impact of adult-child ratios.The findings of the study indicated that preschool children in classrooms with ratios of 1:8 were more likely to receive caregiving rated as very good than those in classrooms with a ratio of 1:9 (Howes et al., 1992).

The combined effects of teacher-child ratios and the organisation of classroom space were investigated by Field (1980). Her study concluded that the optimal classroom for facilitating peer interactions and fantasy play, among middle class preschool children, appeared to be a classroom featuring low teacher/child ratio (1:12) and partitioned special play areas. Regarding group size, a major longitudinal study, conducted in Tennessee from 1985 to 1989, provided evidence of the benefit of small classes in the first years of formal education on later school success, the optimum ratio being 1:15 (see Nye, Boyd-Zaharias, Dewayne Fulton & Wallenhorst, 1992). A similar finding is also reported in the work of Howes et al. (1992). They concluded that children in classrooms with fewer than 18 preschool children were more likely to experience developmentally appropriate activities than those in classrooms with larger numbers of children.

At the beginning of the IEA Preprimary Project in Ireland in 1994 the official teacher-pupil ratio in Irish *primary* schools was 1:24 (Department of Education, 1995). Although the current teacher-pupil ratio has decreased to 1:23 (1996/97) the actual class size can be very different. For example, respondents to an INTO survey conducted in 1995 as part of the preparation for the INTO document on Early Childhood Education, had between 8 and 39 children in their junior infant classrooms - 42% of respondents had 26 or more pupils in their classes, with 3% having class sizes of 36 or more (INTO, 1995).

Organisation of the environment

One of the roles of an educator of young children is the planning and organisation of the learning environment - this includes both inside and outside areas, furniture and equipment. Given the fact that research over the last twenty years has consistently proven that young children learn most effectively by actively doing, through play exploration and talk (see Donaldson, 1978; Hohmann, Banet & Weikart, 1979; Lazar & Darlington, 1982; Dowling, 1988; Sylva, 1994), the learning environment provided for young children ought to respond to their need for active involvement, sensory exploration, personal discovery and creativity, interaction with others, and opportunities to practise and refine skills (Lally, 1989).

Clarke-Stewart (1991), in her review of American research into the effects of daycare, identifies the physical environment as one of four different aspects of day care which appear to be significantly related to children's behaviour and development, the others being the adult's behaviour, the curriculum and the number of children and adults in the group. With respect to the physical environment (health and safety issues aside), it is not so much the amount of physical space or the number of toys available that is important but how the space is organised and the quality of the materials available.

The design of a classroom affects how adults and children work. For example, a High/Scope[1] classroom is divided into well-defined and distinctive work areas, where the materials in each area are appropriate, logically organised and accessible to the children. This organisation directly reflects the principles upon which the High/Scope preschool curriculum is based. These principles are:

- that children construct their understanding of the world by interacting with people, ideas, materials and events.
- that adults are supporters of children's active learning (Hohmann & Weikart, 1995).

Whilst the curriculum currently in use (and under review) in the formal educational school system in Ireland recognises the importance of providing opportunities for children for exploration and discovery learning (Department of Education, 1971), according to the INTO survey referred to above, infant classrooms were deemed to be "grossly under-equipped" (INTO, 1995, p.126) to allow for the informal, activity-based curriculum intended in the child-centred curriculum.

The amount of space available to children is a further consideration in planning an early childhood environment. An emphasis on active learning and choice of activity requires an environment where there is sufficient space for children and adults to move unhindered. However, it does not necessarily follow that the larger the area, the better the learning. An experimental study by Smith and Connolly (1980), which examined simultaneously the effects of both the amount of space and the amount of play equipment on friendships, activities and behaviours of children engaged in free play, found that when more space was made available, the children increased running and chasing activity but there was little or no change in social behaviour.

Evaluation and record-keeping

In order that an early childhood curriculum is effective and the children's needs are being met, it is vital that the teacher is constantly monitoring and assessing the activities of the children in the classroom. Assessment is an integral part of the work of the teacher and involves keeping in touch with effects of teaching and learning (Dowling, 1988). An important issue in this regard is that

> *evaluation and assessment require teachers to be clear about their intentions, and how they will act upon them. This means knowing about child development and the early childhood curriculum, and keeping up to date with recent research and thinking. (Bruce, 1987, p. 168)*

Assessment in the early childhood setting may be formative (continuous), e.g. regularly collecting and dating children's work. It could also take the form of structured observation which is carefully planned and focuses on a particular child and/or activity.

In fact, regular observation is the key to planning, assessment and evaluation in an early years setting and is the main tool for gaining information about individual children (Bruce, 1987; Lally, 1991; Hayes, 1993). Summative evaluation tends to be more formal and focuses on what can be measured. It involves taking a snap shot of a child's developmental status in a particular area which is usually standardised, i.e. capable of being compared to national norms. However, one of the problems of summative methods "is that what is measured, quickly becomes what children ought to know" (Bruce, 1987, p.169).

Furthermore, as Hayes (1993) argues, observing young children

> *objectively over time may give a clearer sense of the progress of development than a formal assessment, where a child may be anxious, off form or unsettled. (Hayes, 1993, p.49)*

Written records provide evidence of assessment and are particularly important in the involvement of parents and other agencies such as psychologists or speech-therapists, in the process of early education (Dowling, 1988). Written records are important,

1. *Because no teacher can be aware of every facet of development without some reference material.*
2. *In order for the teacher to refer to the pace of individual development over a period of time.*
3. *To provide a reference point for other teachers who will be teaching the child.*
4. *As evidence of the child's strengths and weaknesses if there is the need to refer to other agencies, e.g. speech therapists, physiotherapists.*
5. *To help the teacher to assess effectiveness of her teaching in matching the capabilities of the children. (Dorset County Council, cited by Dowling, 1988, p. 135)*

In conclusion, in looking at what the literature has to say about the structural characteristics of a setting, the work of well-trained adults would seem to have an important impact on the quality of provision. It has been recognised that working with young children in an early years educational setting is highly skilled and makes complex demands on the adult (Lally, 1989; Hevey & Curtis, 1996). Appropriate pre-service and inservice training would seem, therefore, to be crucial. Research on group size and adult-child ratios have produced quite consistent results, with group sizes of about 15 children and adult-child ratios of 1:8 considered to be the optimum. Another feature of the early educational setting identified by the literature as important, is the organisation of the environment into distinct work/interest areas which facilitate active learning. Finally, evaluation and assessment through observation should be considered an integral part of the practice of an educator of young children.

One of the aims of the IEA Preprimary Project was to investigate the settings in which Irish 4-year-olds spend their time. Of particular interest was the identification of similarities and differences between preschools and primary schools and between disadvantaged and nondisadvantaged settings in relation to their structural characteristics. In the following sections we give details of the survey used to obtain information relating to the structural characteristics of the sample settings.

5.2 Survey Instruments and Data Collection

Data on the structural characteristics of the four identified settings were obtained by the Provider Survey. This involved administering a separate questionnaire to the director (preschool supervisors and school principals) and to the teacher in each of the sampled settings.

The Provider Survey (director) examined the setting under the following headings:

- physical description: number of rooms and area of space available to the children, the number of children typically in each room at one time, the primary purpose of each room. The kinds of equipment and facilities on the premises were also ascertained.

- management: directors were asked if their settings were in receipt of grants/sponsorship, if clients were charged fees, if settings provided meals or snacks and transport. Directors were also questioned about policy i.e. admission policy, administrative policy and enrolment policy. Another issue addressed was the availability of training to staff.

- patterns of operation: directors were asked how many weeks of the year, days of the week and times of the day the setting was open to clients.

- availability of ancillary services: for example medical services, and outside resources, for example gymnastics and swimming.

- parental involvement: directors were asked to estimate the level of parental involvement, for example how many home visits (if any) there had been with the parents/guardians of each of the target children involved in the project.

A Provider Survey (teacher) was administered to teachers who worked directly with the sample at each of the settings. The teacher was required to answer this questionnaire with the data collector or alternatively she[2] could complete it and return it to him/her.

The questionnaire examined the following:

- Teacher characteristics: details of age, sex, the number of years working with 3 to 5-year-old children, the number of years working in that particular setting, the number of years of full-time education completed, whether a teacher training programme had been completed, and if so for how long.

- enrolment characteristics: the age-range of the children, the number of boys and girls, the staff-pupil ratio.

- materials and equipment: this section of the questionnaire examined the accessibility and availability of a comprehensive list of materials and equipment.

5.3 Findings[3]

The findings are presented in six sections: teacher characteristics, group size and adult-child ratio, the organisation of the physical environment, availability of equipment and materials, evaluation and record-keeping and management issues.

5.3.1 Teacher characteristics

Sex and Age of Teachers

There were no significant differences between the teachers in the four kinds of settings when age, sex and number of years of experience working with 3 to 5-year-old children were examined. All 110 teachers[4] who completed the Provider questionnaire were women. Interestingly, whilst all the preschool directors were also women, 47% of the primary school directors/principals were men. The mean age overall was found to be 38.9 years, the youngest teacher being 20 years (working in a NDD preschool) and the oldest, 65 years (working in a NDD school).

Regarding the number of years of experience working with 3 to 5-year-old children, the shortest amount of time reported was one year (this was reported by the DD preschool, school and NDD school category), the longest was 23 years (reported by the DD preschool category). (See Table 5.1)

Table 5.1 Teacher Characteristics

	DD Presch (N=24)	DD Sch (N=25)	NDD Presch (N=24)	NDD Sch (N=25)
Age				
Mean	38	35	40	43
Minimum	23	22	20	22
Maximum	60	47	55	65
No. yrs. experience with 3-5 year olds	**(N=25)**	**(N=26)**	**(N=25)**	**(N=29)**
Mean	9	7	9	9
Minimum	1	1	2	1
Maximum	23	22	20	20

Teacher Training

When the issue of teacher training was investigated, significant differences between the settings were found. Practically all primary teachers responded that they had attended teacher training courses, while 61% of DD preschool teachers and only 35% of NDD preschool teachers stated that they had attended a training programme (Chi-square=32.18, d.f.=1, $p \leq 0.0001$, (see Table 5.2)[5]. The fact that such a large percentage of preschool teachers were without formal early childhood training is worrying in the light of the importance of appropriate training identified in the literature (see Dunn, 1993; Whitebook et al., 1989). As preschool teachers have no standardised course of preservice training, they rely on short in-service training. Fifty-eight percent of preschool directors responded that such training was available to their staff.

While all but one primary teacher were trained to teach primary school children (4 to 12-year-olds), a majority of primary teachers responded that they had not received additional training (brief or long courses) in areas such as motor development, psychology of primary education, cognitive development, motivation for learning and readiness skills. Furthermore, only 45% of principals reported that inservice training was available for their staff in the school.

Table 5.2 Teacher Training

	DD Presch (N=23)	DD Sch (N=26)	NDD Pre (N=20)	NDD Sch (N=28)
Attendance preservice training				
% 'yes'	61%	100%	35%	96%[6]
Availability of inservice training at settings	(N=25)	(N=25)	(N=23)	(N=22)
% 'yes'	64%	48%	52%	41%

Separate room for adult use only

There were significant differences between school and preschool settings in terms of the availability of a separate room for adult use only (Chi-square=13.52, d.f.=1, p=0.0002). Eighty-five percent of DD schools and 85% of NDD schools reported having this facility, while 57% of DD preschools and 44% of NDD preschools did. The provision of a separate room for teachers, apart from a meeting place for teachers, would also serve as an area to meet parents or representatives from other agencies, such as social workers or psychologists. Another use for such a room would be for the storage of records and evaluations. The lack of a separate room in so many preschools, and to a lesser extent in primary schools, limits the opportunities for informal contacts between staff - so important for continued professional and personal development.

5.3.2 Group size and adult-child ratio[7]

Group size

Group sizes in the DD and NDD school settings were on average 24 and 27 respectively while in DD preschools the average group size was 15 and in NDD preschools it was 14 (see Table 5.3). In some settings, most usually preschool ones, there was a second adult in the child's group and sometimes even a third. Some such settings returned questionnaires which had been completed both by the primary adult in the setting who was responsible for the child's care and by a second or sometimes third adult present in the setting. 'Second Adults' (where a second adult in the setting completed the questionnaire) numbered 35, 28 of whom worked in preschool settings.

Adult-child ratio

The average adult-child ratios for DD schools was 1:25 and for NDD schools 1:26, with maximum figures of 1:30 and 1:34 for DD and NDD schools respectively. These figures compare very unfavourably with the optimum group sizes identified by research for early years settings of 15 children and adult:child ratios of 1:8 (see Section 5.1), and would seem to have important implications for both the quality and number of teacher/pupil interactions, an issue which will be investigated in Chapter 7.

Although the DD and NDD preschools had average adult-child ratios of 1:8 and 1:6 respectively, which compare favourably with the recommended ratios, some settings had much larger ratios, as is evident by the maximum figures.

Table 5.3 Group Size and Adult/Child Ratio

	DD Presch (N=30)	DD Sch (N=28)	NDD Presch (N=35)	NDD Sch (N=30)
Group size				
Mean	14.8	24.1	14.3	26.7
Median	14.4	24	14	28
Minimum	6	15	4	15
Maximum	36	30	28	34
Adult/child ratio				
Median	1:6	1:25	1:8	1:26
Minimum	1:4	1:11	1:2	1:15
Maximum	1:36	1:30	1:11	1:34

It is worth noting that all the preschool settings had boys and girls in attendance, whereas 15 school settings were single-sex schools.

5.3.3 Organisation of the Physical Environment

Child appropriate

Most settings reported that they were structured for use by children: 91% of DD preschools, 85% of DD schools, 96% of NDD preschools, 80% of NDD schools. For example, directors were asked if their setting had child-sized tables and chairs; child-sized toilets, sinks and shelves low enough for children to reach safely. Cots/mats/beds were available in four preschool settings only: two of these were in daily use, two of these were not in daily use.

Availability of outdoor play area

Regarding outdoor facilities for playing, primary school children seemed to be better catered for than their counterparts in preschools, in particular those children attending DD preschools. All schools who responded reported having this facility, and 63% of DD preschools and 91% of NDD preschools did; this difference between primary and preschool settings was significant (Chi-square=13.69, d.f.=1, p=0.0002). There were also significant differences between DD and NDD settings (Chi-square=4.854, d.f.=1, p=0.0276), with more NDD settings responding that they had an outdoor play area (96%) than DD settings (82%).

Table 5.4 Availability of an Outdoor Play Area

	DD Presch (N=24)	DD Sch (N=26)	NDD Presch (N=23)	NDD Sch (N=26)
Outdoor play area available- % 'yes'	63%	100%	91%	100%

The provision of play equipment in outdoor areas will be examined in Section 5.3.4.

Special play areas within classrooms

Teachers were asked if they defined special play areas within their classrooms, for example, block corner, nature corner, dress-up corner. Whilst the majority of settings responded that they did; this practice was more common among teachers in preschools than in schools, with 92% of preschool teachers responding that there were special play areas in the classroom as compared to 79% of school teachers.

Table 5.5 Availability of Special Play Areas in Classroom

	DD Presch (N=24)	DD Sch (N=25)	NDD Presch (N=25)	NDD Sch (N=27)
Special play areas in classroom - % 'yes'	88%	88%	96%	70%

5.3.4 Availability of Materials and Equipment

Teachers were given a comprehensive list of items of equipment (116 items in total) and asked if each was present at their setting and available to the children. For purposes of presentation, the items of equipment have been grouped into six main categories, though many of the items could fit into more than one category. The categories are as follows: gross motor, fine motor, imaginative play, art/creativity, music and audio/visual, preacademic games /materials.

It is of note that there was quite a high proportion of missing information for this part of the questionnaire, most notably among the teachers in NDD schools. The percentage of missing information varied according to the particular item of equipment. For example, of the 29 teachers in NDD schools, 13 teachers provided no information regarding the availability of workbooks for children. While it may be surmised that when no response, either positive or negative, was given for a particular item, either a teacher didn't know whether this material was available or not or the teacher chose not to give that information - the authors have no way of knowing which was the case. It is also possible that the very large number of items presented to the respondents and the time involved in responding discouraged cooperation in completing this part of the questionnaire.

The following tables and figures present the percentages of positive responses by teachers to the availability of a selected 33 items of the total 116 items of equipment. For the purposes of the following tables, 'N' or number of respondents represents the number of teachers who responded to the availability of *some or all* of the items of equipment. The full list of 116 items of materials and equipment is presented in Appendix 5.

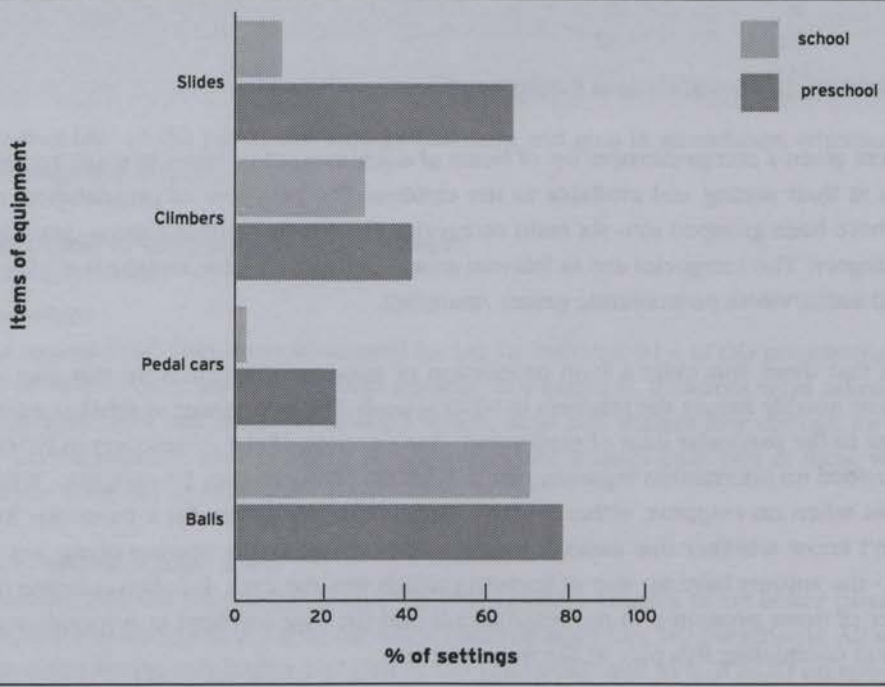
Availability of gross motor equipment

As evident from Table 5.6 and Figure 5.1 below, there were significant differences between the preschool and school settings when the availability of selected items of gross motor equipment were investigated. For example, 14 (48%) DD preschools and 15 (60%) NDD preschools reported having slides available for the children, whereas only two (7%) DD schools and three (10%) NDD schools reported the availability of slides. Thus, although all schools responded to having outdoor play facilities, the indicators are that the outdoor environments were poorly resourced.

Table 5.6 Availability of Gross Motor Equipment

	DD Presch (N=29)	DD Sch (N=27)	NDD Presch (N=25)	NDD Sch (N=29)
Slides	48%	7%	60%	10%
Climbers	21%	30%	48%	21%
Pedal Cars	31%	4%	8%	0%
Balls	55%	63%	72%	52%

Figure 5.1 Availability of gross motor equipment



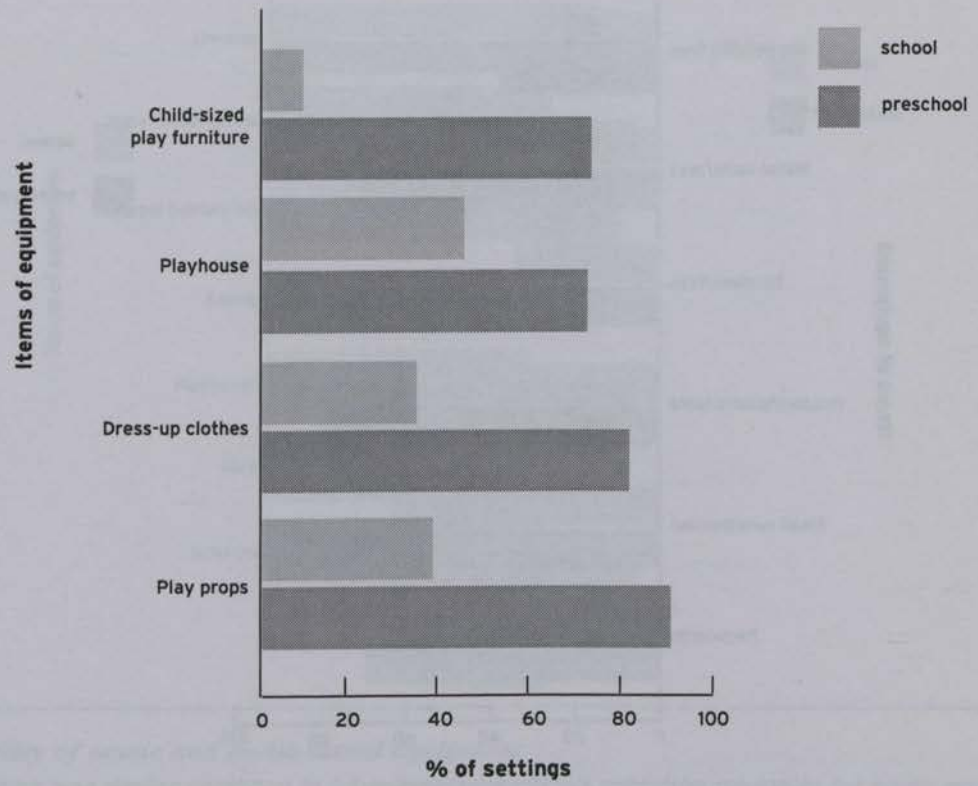
Availability of imaginative play equipment

Findings relating to the availability of imaginative play equipment are presented in Table 5.7 and Figure 5.2. NDD preschools were found to be best equipped in terms of this category of equipment. As was the case with gross motor materials, overall there were significant differences between schools and preschools regarding reported availability of imaginative play equipment. For example, 73% of preschool teachers responded that play props were available in their setting whereas the corresponding figure among school teachers was less than half of that at 32%. Whether or not these differences between schools and preschools is reflected in the activities in the classroom is investigated in Chapter 7.

Table 5.7 Availability of Imaginative Play Equipment

	DD Presch (N=29)	DD Sch (N=27)	NDD Presch (N=25)	NDD Sch (N=29)
Play props	69%	30%	76%	31%
Dress-up clothes	62%	44%	68%	10%
Play-house	55%	19%	60%	17%
Child-sized play furniture	48%	7%	68%	7%

Figure 5.2 Availability of imaginative play equipment



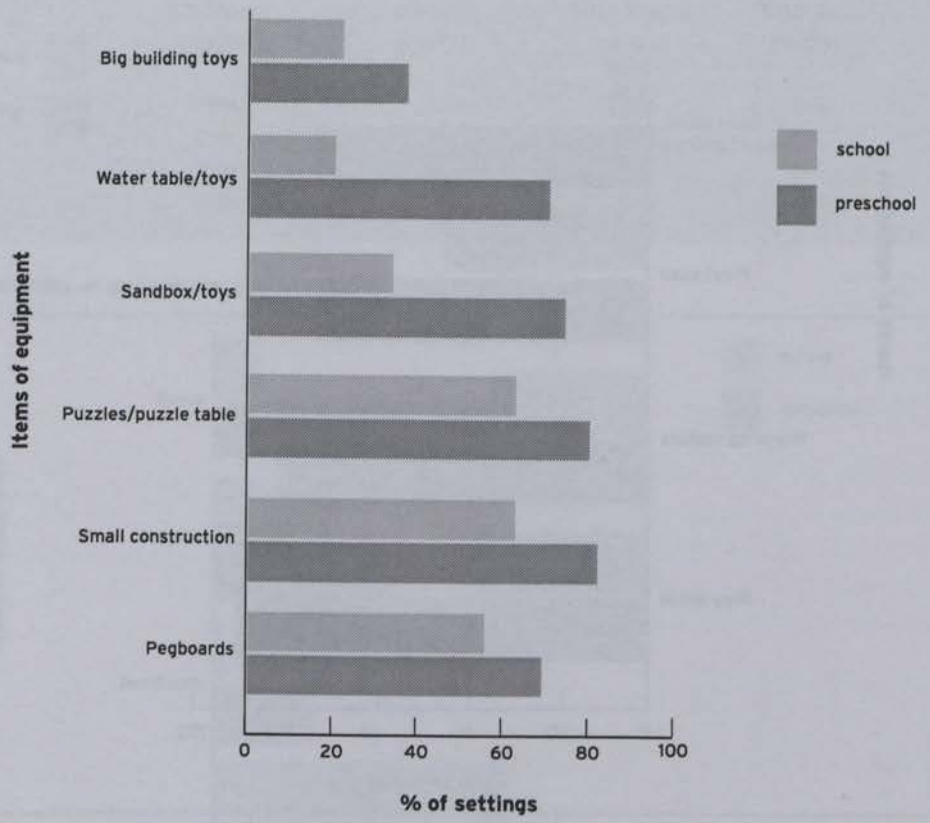
Availability of fine motor equipment

With the exception of big building toys more teachers in NDD preschools than in DD preschools reported availability of all other selected items of fine motor equipment. Reported availability of puzzles, small construction toys and pegboards in DD schools, while lower, was not significantly so. However, when the provision of a sandbox and water table was investigated there were great differences between preschools and schools. For example 18 (72%) NDD preschools teachers responded that a water table/toys was available, the corresponding figure in NDD schools was 3 (10%).

Table 5.8 Availability of Fine Motor Equipment

	DD Presch (N=29)	DD Sch (N=27)	NDD Presch (N=25)	NDD Sch (N=29)
Big building toys	38%	30%	36%	14%
Water table/toys	69%	30%	72%	10%
Sandbox/toys	72%	33%	76%	35%
Puzzles/puzzle table	76%	70%	84%	55%
Small construction toys	76%	70%	88%	55%
Pegboards	62%	63%	76%	48%

Figure 5.3 Availability of fine motor equipment



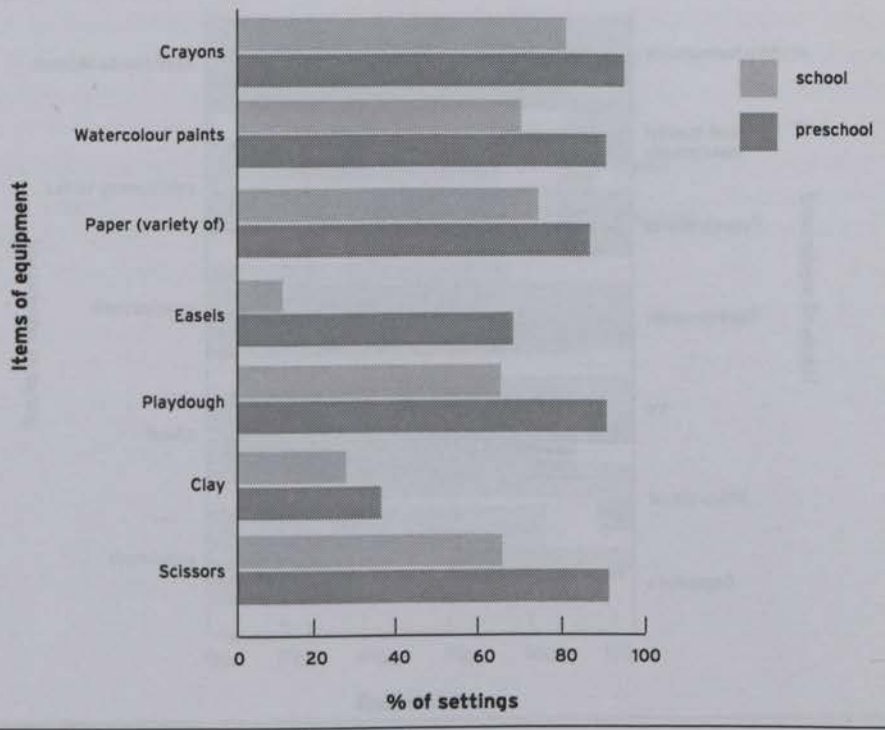
Availability of Art Materials

The great differences in availability of equipment in the above categories between schools and preschools were not so evident when the figures for certain art materials were investigated. The reported availability of each selected item shown in Table 5.9 was highest in NDD preschools (see also Figure 5.5) and lowest in NDD schools. The availability of easels did illustrate contrasting provision across the setting types. Three (11%) DD schools and two (7%) NDD schools reported the availability of easels, whereas among the preschool settings the availability of easels was reported in 14 (48%) DD preschools and 15 (60%) NDD preschools.

Table 5.9 Availability of Art Materials

	DD Presch (N= 29)	DD Sch (N= 27)	NDD Presch (N = 25)	NDD Sch (N = 29)
Crayons	72%	74%	80%	55%
Watercolour paints	69%	67%	76%	45%
Variety of paper	59%	63%	80%	55%
Easels	48%	11%	60%	7%
Playdough	66%	56%	80%	48%
Clay	35%	22%	52%	21%
Scissors	62%	59%	84%	45%

Figure 5.4 Availability of art equipment



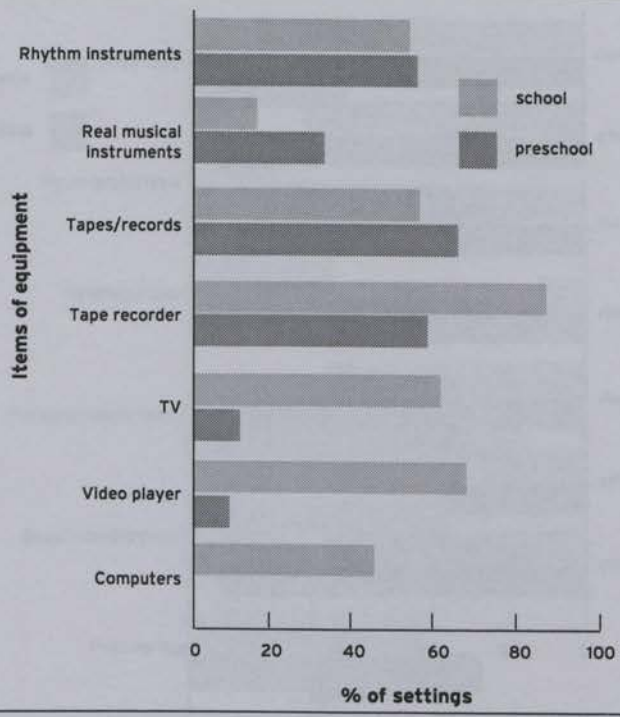
Availability of music and audio-visual equipment

Whilst there was similar provision in schools and preschools regarding resources for music activities, the findings in relation to the availability of tape recorders, televisions, video players and computers are interesting. More schools than preschools reported availability of these specific items of equipment (see Table 5.10). Teachers in 11 (41%) DD schools and in nine (31%) NDD schools reported the availability of computers, whereas no teachers in either preschool category reported having a computer available for the children. Interestingly, of the 11 DD school settings who reported the availability of computers, only three settings reported that computers were in daily use and of the nine NDD settings who reported availability of a computer(s), two reported daily usage.

Table 5.10 Availability of Music and Audio-Visual Equipment

	DD Presch (N = 29)	DD Sch (N = 27)	NDD Presch (N = 25)	NDD Sch (N = 29)
Rhythm instruments	45%	48%	44%	38%
Real musical instruments	24%	19%	28%	7%
Tapes/records	49%	48%	60%	41%
Tape recorder	49%	74%	48%	52%
Television	10%	67%	8%	31%
Video player	10%	67%	4%	41%
Computer	0%	41%	0%	31%

Figure 5.5 Availability of music and audio-visual equipment



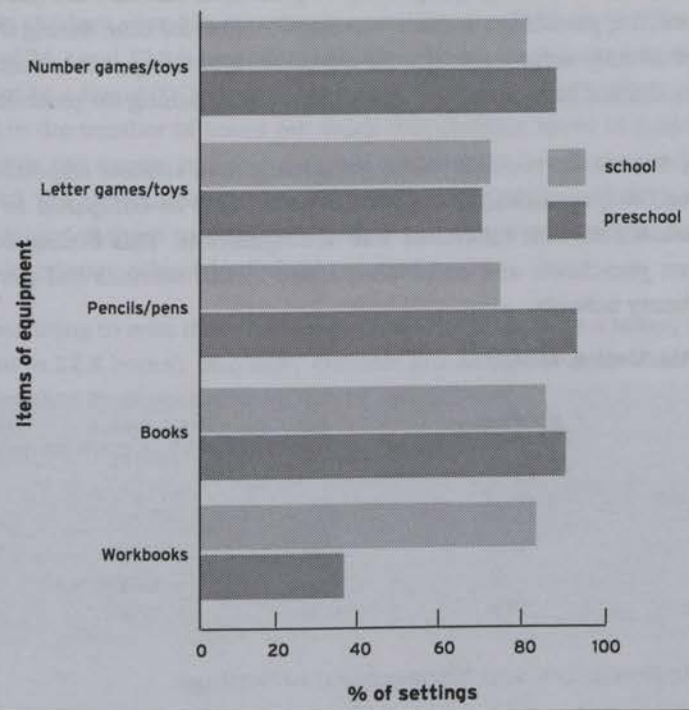
Availability of preacademic and reading materials

Looking at the findings for availability of selected preacademic and reading equipment, it would seem that there is more provision made for this type of activity in schools than in preschools (see Table 5.11 and Figure 5.6). For example, six (21%) teachers in DD preschools reported the availability of workbooks in their setting (18 teachers reported that they were *not* available) and in NDD preschools the corresponding figure was nine (36%). Fourteen teachers in NDD preschools reported that they were *not* available. The reported availability in DD schools was 82% or 22 settings. Two teachers reported that workbooks were not available. Of the 29 teachers in NDD schools who responded, just one reported that workbooks were *not* available, 15 (52%) reported that they were available and there was no information for the remaining 13 settings. Looking at the findings for availability of books, it is worth recalling that there was quite a high rate of missing information for this part of the questionnaire. Although 73% of DD preschools reported the availability of books, there was no information for 24% of DD preschools. However one teacher in each of the four setting types reported that books were *not* available to the children. Thus it would seem that the children in these four settings had no opportunities to look at picture books and hear stories, essential activities for language development and later reading ability.

Table 5.11 Availability of Preacademic and Reading Materials

	DD Presch (N = 29)	DD Sch (N = 27)	NDD Presch (N = 25)	NDD Sch (N = 29)
Number games and toys	69%	74%	72%	55%
Letter games and toys	52%	67%	60%	48%
Pencils/pens	69%	70%	80%	48%
Books	72%	85%	76%	52%
Workbooks	21%	82%	36%	52%

Figure 5.6 Availability of preacademic and reading materials



Summary

Overall the reported availability of the selected items of materials/equipment was highest in NDD preschool settings. More teachers in preschools than in schools reported availability of almost all materials/equipment in all categories. For particular items, such as slides, child-sized play furniture, water and sand tables and easels this difference was very significant. The exceptions to this were the higher reported availability in schools of tape recorders, televisions, video players, computers, letter games and workbooks. The findings reported in this section indicate a contrasting picture of provision and organisation of the physical environment in preschools and schools. The information supplied did not include details about either the quantity or quality of individual items in a setting. However, whether an individual teacher included more resources for play activities or preacademic materials in the management of the physical environment reflects her expectations of what young children should learn at age 4. It could also reflect the amount of financial resources available for purchasing materials and equipment. The relatively low (in some cases very low) reported availability of resources in primary classrooms is in agreement with the finding of the INTO survey (1995) which found Junior Infant classrooms to be poorly resourced (see Section 5.1).

5.3.5 Evaluation and record-keeping

There were significant differences between preschool and primary school settings in terms of whether or not developmental test records of children were kept. Whereas 71% of DD schools and 90% of NDD schools reported keeping records, no DD preschools and 12% of NDD preschools reported that they did. (Chi-square=35.09, d.f.=1, $p \leq 0.0001$). It is of note that 46 cases of "missing information" or "don't know" were found for this item. There were also significant differences between preschool and primary school settings when the maintenance of records of evaluation was investigated. Thirty-three per cent of DD preschools and 12% of NDD preschools reported that they maintained and updated records of evaluations as compared to 86% of DD schools and 94% of NDD schools (Chi-square=33.13, d.f.=1, $p \leq 0.0001$).

This lack of record-keeping in preschool settings is worth noting in terms of the need for on-going evaluation of the effectiveness of curriculum, monitoring children's learning and development and sharing knowledge with parents. As outlined in Section 5.1 the literature points to record-keeping and evaluation as an integral part of the work of an early educator (see Dowling, 1988; Bruce, 1987). However, it

is possible that the physical constraints of the preschool settings made it difficult for teachers to maintain such records. It is to be recalled that a large proportion of preschool teachers did not have a room for adult use only. Furthermore, it is possible that there was no provision for time during the day when the teacher was not with and directly responsible for the children. It is also possible that this finding could be accounted for by the limited formal and regulated preservice training for preschool teachers.

All settings reported keeping attendance records. More preschools than schools responded that they kept medical records (58% of DD preschools, 65% of NDD preschools as compared to 38% of DD schools and 50% of NDD schools), but this difference was not significant. This finding could be as a result of a closer link between preschools and community-based health services and personnel than would be the case among primary schools.

Table 5.12 Percentages of Settings Keeping Records

Record Type	DD Presch (N=12)	DD Sch (N=21)	NDD Presch (N=17)	NDD Sch (N=18)
Attendance	100%	100%	100%	100%
Medical	58%	38%	65%	50%
Developmental Test Records	0%	71%	12%	90%
Maintained records of evaluation	33%	86%	12%	94%

5.3.6 Availability of Outside Resources and Management of Settings

Availability of ancillary services and outside resources

Respondents were given a list of services and resources and asked about availability at their setting. In Table 5.13 numbers in bold type refer to services available by referral; numbers in ordinary type refer to services available on site. Preschools, primary schools, disadvantaged settings and non-disadvantaged settings did not differ greatly when the availability of ancillary services and outside resources were investigated. Generally, the numbers of settings responding positively to having services on site was very low, for example, no setting reported having a psychological service on site. The reporting of availability of this service by referral ranged from 11 settings (NDD preschool) to 24 settings (NDD school). It should be noted that the response rate for this question was low, perhaps reflecting a lack of knowledge among directors concerning the availability of ancillary services in general.

Table 5.13 Services Available on Site or by Referral[a]

	DD Presch		DD Sch		NDD Presch		NDD Sch		N respondent
Psychological	0	19	0	21	0	11	0	24	75
Devtl Assessment	1	16	3	16	1	7	2	16	62
Educational Evaluation	3	10	9	13	3	5	16	8	67
Medical Services	4	15	7	17	0	12	10	15	80
Dental Services	4	10	4	20	0	8	4	21	71
Preventive/Remedial Health	3	9	10	10	0	7	3	11	53
Nutritional Services	4	5	2	3	1	6	2	4	27
Vision Testing	3	13	9	16	0	10	13	11	75
Hearing Testing	4	3	9	16	0	11	13	11	77
Parent Training	6	6	10	0	2	4	5	2	35
Second Language Training	2	2	15	0	1	1	21	1	43
Social Work	2	18	0	20	0	10	0	15	65
Special Education	0	10	9	10	0	6	9	3	47

Patterns of operation

The findings presented in Table 5.14 indicate that there were significant differences between the number of hours children spend in preschools and schools. Children in DD and NDD school settings spent an average of 24.2 and 22.8 hours per week respectively at school, while the children in preschools spent an average of 14.1 hours (DD preschools) or 12.3 hours per week (NDD preschools) in that setting. The great range in the number of hours per week that children spent in preschool settings, for example, for DD preschools the minimum was 6 hours, maximum 25 hours per week, could be seen to reflect the diversity and the unregulated nature of preschool provision. It is possible that children attending preschools attended these settings only two or three days per week as compared to their counterparts' attendance in primary school for five days a week.

It is also interesting to note that on average the DD schools have a longer week than NDD schools (24.2 as compared to 22.8 hours). Similarly, children attending DD preschools spent on average more hours in the setting than their counterparts in NDD preschools.

Table 5.14 Opening Hours of Settings: Summary Statistics

	DD Presch (N=90)	DD School (N=102)	NDD Presch (N=85)	DD Sch (N=83)
Hours per week in attendance*				
Mean	14.1	24.2	12.3	22.8
Median	14	23.6	12	22.5
S.D.	5.3	2.9	3.4	2.5
Minimum	6	20	7	17.5
Maximum	25	30	27.5	28
	(N=22)	(N=23)	(N=22)	(N=23)
Mean no. of weeks open per year	40	38	38	38

**Information on the number of hours per week children spent in schools or preschools was available from the family background questionnaire which is discussed in Chapter 4.*

Payment of fees

Setting type and payment of fees by parents were found to be related, with significant differences between primary school and preschool settings (Chi-square=67.17, d.f.=1, $p \leq 0.0001$). Nearly all schools said they did not charge fees (96%) as compared to only 12% of preschools. Table 5.15 presents the percentages of 'yes' replies regarding the payment of fees.

The large percentage of preschools charging fees (both DD preschools and NDD preschools) reflects the current state in Ireland concerning the very limited state support for preschool education. As outlined in Section 2.3, NDD preschools tend to be run privately as small businesses, thus the fact that 96% of these preschools charge fees is not surprising. Interestingly, 81% of DD preschools charge fees. This would seem to have important implications for equal opportunities of access to preschool education for disadvantaged children. Though the Health Boards generally provide grants towards the operating costs of DD preschools, and in some exceptional cases the Department of Social Welfare would cover the fees of an individual child, in general, parents are obliged to pay the preschool fees. Whilst the actual fees are small and determined by parents' ability to pay, they are very necessary in covering the day-to-day running costs of DD preschools which are run on a non-profit making basis.

Table 5.15 Payment of Fees: Percentage of 'Yes' Replies

	DD Presch (N= 26)	DD Sch (N=25)	NDD Pre (N=23)	NDD Sch (N=22)
Payment of fees - 'yes'	81%	4%	96%	5%
Payment of Additional Charges - 'yes'	17%	70%	14%	77%

Supervisors/principals were also asked if parents were required to pay additional fees, for example, music fees, gym fees, field trip fees. Setting type and payment were again found to be related, with significant differences between preschool and primary school settings (Chi-square=29.65, d.f.=1, p≤ 0.0001). Not surprisingly, 70% of DD schools and 77% of NDD schools responded that parents were required to pay additional charges, while only 17% of DD preschools and 14% of NDD preschools were required to pay additional charges.

Provision of meals and transport

Findings on the provision of meals and transport are presented in Table 5.16. Seventy-six per cent of DD preschools and 52% of NDD preschools reported providing meals; 54% of DD schools and 12% of NDD schools reported providing meals. Statistical analysis indicated that setting type and provision of meals were found to be related; there were significant differences between preschool and school settings (Chi-square=9.668, d.f.=1, p=0.0019). There were also significant differences between DD and NDD settings (Chi-square=11.08, d.f.=1, p=0.0009). Details regarding how substantial the meals are were not provided.

Regarding the provision of transport to and from the children's homes, only 9% of DD preschools, 9% of NDD preschools and 4% of DD schools replied that they provided transport. NDD schools had the highest level of transport provision at 17%.

Table 5.16 Percentages of Settings Providing Meals and Transport

	DD Presch (N=25)	DD Sch (N=26)	NDD Presch (N=23)	NDD Sch (N=25)
Meals - 'yes'	76%	54%	52%	12%
	(N=22)	(N=24)	(N=23)	(N=24)
Transport - 'yes'	9%	4%	9%	17%

Priority for enrolment

There were significant differences both between DD and NDD settings (Chi-square=15.45, d.f.=1, p≤0.0001) and between preschool and school settings (Chi-square=7.624, d.f.=1, p=0.0058) in terms of giving priority for enrolment. Seventy-seven per cent of DD preschools replied that they did give priority to certain groups whilst 9% of NDD preschools, 21% of DD schools and 17% of NDD schools gave priority to certain groups. While some DD settings reported giving priority to 'low income' and 'single-parent' groups in particular, numbers were small. Fourteen DD preschools, four DD schools and no NDD settings responded that they gave priority to low income groups; seven DD preschools and three DD schools reported giving priority to single parents, while no NDD settings did.

In an effort to redress the imbalance between social classes in terms of access to, and participation in, a full education, the Department of Education designated a number of schools in deprived areas 'disadvantaged' for registration and staffing purposes (see Sections 1.4 and 3.2). Given this, the fact that 77% of DD preschools replied that they did give priority to certain groups for enrolment is not surprising. However, the small percentages of DD preschools and schools giving priority to 'low income groups' and 'single-parent' groups in particular was unexpected.

5.4 Discussion

Whilst the findings indicate some similarities between the setting types in terms of structural characteristics, the differences were more striking and significant, particularly between preschools and schools. Firstly, there were significant differences in the training of preschool and primary school teach-

ers. All but one primary teacher had attended a teacher training course whereas 61% of DD preschool teachers and only 35% of NDD teachers had attended a formal training programme. A national regulated system of training and education for preschool teachers would seem, therefore, to be essential.

Regarding the professional development of primary teachers who are qualified to teach 4-year-olds, it is possible that the distinct learning needs of young children are lost sight of in a three-year training course which prepares teachers to meet the learning needs of children from aged 4 years to 12 years who attend Irish primary schools. With this in mind, our findings indicate that systematic inservice education or specific postgraduate opportunities would seem to be a priority for primary teachers working with 4 to 5-year-olds in order that they may keep abreast of current thinking in the field of early years education.

Average group sizes and adult-child ratios were much larger in primary school settings than in preschool settings and more preschools than schools reported that a second adult was working in the classroom. There were also differences between the setting types in the organisation of the physical environment. Whereas all primary schools had an outdoor play area, 37% of DD preschools did not. Since the learning environment of an early childhood setting includes both indoor and outdoor facilities, the fact that 37% of DD preschool settings had no outdoor play area would seem to have important implications for the provision of the needs of the children attending these settings who, it could be argued, have most need for a safe, secure and stimulating environment in which to play. Early education settings in urban areas where many children live in confined conditions have special responsibility, as Curtis (date unknown) argues, to offer opportunities to help in the development of gross motor skills and spatial awareness.

Teachers in the majority of settings defined special play areas within the classroom, though this practice was more common in preschools than in schools. Regarding the provision of equipment and materials, children in NDD preschools would seem to have the greatest variety of materials available to them. While it is of note that the response rate among teachers in NDD school settings was very poor for this part of the questionnaire, the indications are that the provision of material for fine motor, gross motor, imaginative play and art activities was much more varied in preschool settings than in school settings. Schools settings had higher rates of availability of preacademic materials such as workbooks and letter games, and also much high rates of availability of audio-visual and technological equipment such as televisions, videos and computers.

There were also significant differences between preschools and schools regarding the number of hours per week spent at the setting. Children attending primary schools spent on average 11 hours longer per week in school than children in preschools. Finally, the findings also indicated a number of differences primarily between preschools and schools in relation to management issues such as the provision of meals and transport and the payment of fees.

In conclusion, research on quality of early years provision has identified structural factors such as the quality of human resources, organisation of the physical environment and appropriate group size and adult-child ratios as being significant. There were great structural differences between preschools and primary schools. The variability found at the setting level in terms of the above identified factors might indicate great variance in the quality of experiences of the children in the sample in the present study. However the quality of children's experiences can also be influenced, for example, by the activities provided for the children in the classroom, the nature of the interactions between adults and children or the group structure of the settings. These factors are examined in Chapter 7.

Summary

- Preschool teachers and primary teachers did not differ greatly when age, sex and number of years of experience were investigated. However, there were differences evident when the issue of training was examined.
- There were significant differences in adult-child ratios between preschool and primary school settings. The average adult-child ratios in preschools were 1:6 and 1:8 in DD and NDD preschools respectively. Primary schools had average ratios of 1:25 in DD schools and 1:26 in NDD schools.
- All setting types reported availability of special play areas within the classroom, though more schools than preschools reported having outdoor facilities.
- Overall, the reported availability of the selected items of materials/equipment was highest in NDD preschool settings.
- The widest variety of materials and equipment for fine motor, gross motor, imaginative play and art activities was found in preschool settings rather than in school settings.
- School settings had higher rates of availability of preacademic materials such as workbooks and letter games, and also much high rates of availability of audio/visual and technological equipment such as televisions, videos and computers.
- A large percentage of preschools charged fees (96% NDD and 81% DD preschools). Most schools did not.
- Availability of ancillary services across all settings, disadvantaged and non-disadvantaged, primary schools and preschools was generally poor, with more services available by referral than on site.
- Very few preschool settings (12% NDD and 0% DD) kept developmental test records and evaluations of children.
- Children attending primary school settings spent, on average, 11 hours longer per week in school than the children attending preschools.

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1 The High/Scope preschool curriculum originated in the United States in 1960s. Originally known as the Perry Pre-school Project, it was one of the first intervention preschool projects established. It has been the subject of longitudinal research under the direction of David Weikart, and a recent follow-up study at age 23 years of those who attended the programme showed positive results (Schweinhart & Weikart, 1997).

2 In all cases the teacher was female.

3 All this information was collected by data collectors, coded by the research team and forwarded to the US for inclusion with the main international comparative data set. It is, however, beyond the scope of this national study to analyse all the information collected. Hence, the Findings section consists of an analysis of what the research team considered the most pertinent and relevant information for this report in the light of existing information on the situation in Ireland.

4 While 109 settings participated in the IEA Preprimary Project in all, information was coded for 110. In three settings two teachers returned questionnaires. This was because the four target children were split between two teachers in these cases. Questionnaires were not returned by the remainder.

5 There would have been differences in the type and length of teacher training experienced by preschool and primary school teachers. This table is meant only to give an indication as to whether respondents had some kind of training.

6 The respondent was a substitute teacher who had one target child in the setting in her class. The three other target children in the setting were in another class with another teacher who also completed a questionnaire

7 Figures relating to group size and adult-child ratio were obtained from the International coordinating centre of the IEA Preprimary Project, High/Scope Educational Foundation.

8 Not all settings returned all questionnaires. Even amongst those who did, not all answers were completed. Missing data was coded as such.

CHAPTER 6 | TEACHER AND PARENT EXPECTATIONS

The examination of both teacher and parent expectations of early childhood education was an important element of the IEA Preprimary Project. This chapter begins with a brief literature review highlighting the more significant findings in teacher/parent expectations research. A description of the Survey Instrument follows. We then present the findings and the chapter concludes with a discussion.

Karwowska-Struczyk (forthcoming) argues that teacher and parent beliefs about important areas of development for young children are expressions of their value systems about the concept of the adult they wish the child to become. As these expectations can be viewed as part of a hidden curriculum they can be seen to influence the kind of activities children experience in both their homes and in preschool/primary school settings.

The views of a parent about child development have wide-ranging effects on all aspects of a child's life. Taking the child's early education as an example, how the parent views child development and the role of early education will influence the choice of early educational setting, the level of involvement in his/her education and the level of interaction with the educational setting and with those in charge of the child's education. The views of an educator will also influence a wide range of variables, including the kind of activities provided in the classroom, the emphasis on academic and non-academic subjects, the opportunities for play and levels of parental participation in children's learning, both in and out of the classroom. Furthermore, according to Karwowska-Struczyk (forthcoming) the congruence, i.e. agreement, or lack of congruence, will further influence the child's development.

The IEA Preprimary Project investigated the following:

- **Parents' educational values and expectations, i.e. their expectations regarding the most and least important aspects of early years provision for 4-year-olds in Ireland.**
- **The educational values and expectations of teachers.**
- **The degree of perceived ideological harmony between parental expectations, official curriculum and teachers' expectations, i.e. the level of agreement between parents and teachers.**
- **The degree to which Irish teachers' expectations are reflected in their practice in the classroom. This aspect of the study will be analysed in Chapter 7.**

Since the present study wishes to address the issues of disadvantage, a particular interest is in comparing teacher and parent expectations in the four identified settings - designated disadvantaged (DD) preschools and primary schools and non-designated disadvantaged (NDD) preschools and primary schools.

6.1 Literature Review

International educational literature suggests that teachers tend to disagree with a strong emphasis on academics in the early years of a child's education (Higgins-Hains, Fowler, Schwartz, Kottwitz & Rosenkoetter, 1989; Rusher, McGrevin, & Lambiotte, 1992; Bennett & Kell, 1989). This finding is also evident in Irish research. An INTO survey (1995) found consensus amongst junior infant teachers concerning the most important and least important aspects of the infant curriculum. The three most important areas of the infant curriculum were considered to be oral language skills, listening skills and social skills, while preacademic

and reading skills were rated least important. However, while junior infant teachers in the INTO survey ranked reading and preacademic skills as least important, a surprisingly high percentage of the same teachers reported that they began teaching formal reading, writing and mathematics during the first term in junior infants. Hence, there appears to be a contradiction between the teachers' views and their practice. Furthermore, whilst 67% of the teachers also considered the Infant Curriculum (see Section 2.5) either very appropriate or appropriate for their classroom situation, almost one in three teachers did not (32%).

There is often a mismatch between teachers' expectations of what is important for children to learn in early education and what is actually on the curriculum. Hatch and Freeman (1988) attempted to assess kindergarten philosophies and practices from the perspectives of teachers, principals and supervisors. Analyses of 36 interviews in 12 school settings in Ohio led to the identification of two broad generalisations. Firstly, they found that the kindergarten programmes described by the teachers, principals and supervisors were predominantly skill-centred, academically-oriented programmes designed to prepare children for "first grade work". Secondly, they found that individuals responsible for implementing these programmes may not have believed that their kindergartens best served the needs of young children, with the result that these individuals experienced philosophy-reality conflicts.

In a study which examined the match between teachers' and principals' beliefs about early childhood education, Rusher et al. (1992) found principals and teachers in Texas to be generally in agreement regarding the content of kindergarten programmes, but significant conflict arose over the block of time that should be devoted to free play, with teachers supporting more allocated time than principals. Teachers disagreed with a strong emphasis on academics, but firmly agreed with child-centred practices. In general, the principals in the sample reflected similar beliefs, but the similarity was less strong between male principals and (female) teachers than between female principals and (female) teachers.

Further evidence of a mismatch between teachers' beliefs and their classroom practice was found in the study of Bennett and Kell (1989). They investigated 4-year-olds in 60 schools in three different local education authorities in Britain, interviewing teachers and head teachers and conducting in-depth observations of children in their classrooms. They found that there was a gulf between the aims infant teachers wish to pursue and what they attempt to achieve. While affective aims dominated the infant teachers' philosophy; cognitive activities dominated their curriculum. Amongst other reasons accounting for this phenomenon the authors suggested that the teachers felt under pressure from the parents to achieve progress in the basic skills.

What about parental expectations of early childhood education? The literature suggests that parents and teachers differ in the degree of emphasis they place on different areas of a child's development. In their study in the US, Knudsen-Lindauer and Harris (1989) found that while parents and teachers are in general agreement about the focus of kindergarten curricula and about which skills and abilities are the most and least important for children to possess upon kindergarten entry, some differences did exist. With regard to expectations of the kindergarten curriculum, teachers, mothers and fathers displayed agreement in rating listening and confidence as the two most important developmental areas and skills to be emphasised in kindergarten. Teachers rated social skills as the third most important item to be emphasised, while mothers and fathers selected intellectual skills.

Carlson and Stenmalm's (1989) comparative study of professional and parental views of early childhood programmes in Sweden and the United States found similarities in terms of national goals for early childhood education. However, the contexts surrounding early childhood programmes in the two countries are different, for example, Sweden has a national curriculum for early childhood education, while early childhood programmes in the United States are varied in curricula, with differing degrees of parental involvement. Results of their study indicated that more agreement between parents and professionals

existed in Sweden in terms of what was considered important for children in early education, than did between parents and professionals in the US.

Karwowska-Struczyk (forthcoming) argues that a low level of congruence between parent and teacher expectations may have positive or negative outcomes depending on factors such as the individual child or the family unit. Likewise, a high level of congruence may have positive or negative consequences. Low congruence may mean that either a child is moved to develop new skills and competencies to cope with two different microsystems of home and educational setting, or is moved to conflict because of the lack of similarity between the two. With high congruence the child may be more psychologically secure but have few opportunities to acquire the competencies which are neglected by both socialisation environments.

In summary, current research has found both elements of agreement and disagreement between parents and teachers expectations of early childhood care and education. There is also evidence of conflict between early childhood teachers' beliefs and ideologies, and their classroom practices and curriculum content. An interesting issue investigated has been the influence of high and low congruence between teacher and parent expectations on children's development.

6.2 Survey Instruments and Data Collection

Teachers from 104 settings provided information on expectations. In total, 113 teachers completed Expectations questionnaires; more than one teacher completed questionnaires in nine settings, while in five settings no information was returned. From a possible 396 children attending four types of settings - 27 DD schools, 28 NDD schools, 29 DD preschools, 25 NDD preschools - 382 parents provided Expectations information.

Two interview schedules were used, one with teachers, one with parents. Each interview divided young children's development into eight areas, and was used along with a set of pictures illustrating the eight areas of development. The eight areas were preacademic, motor/physical skills, self-expression skills, language skills, social skills with peers, social skills with adults, self-sufficiency skills, self-assessment skills. The interviews took less than thirty minutes each to complete.

Teachers

Respondents were asked:

1. what were the three most important skills they thought children should learn between the ages of 3 and 5 and to rank them in order of importance. They were then asked to choose the three least important categories and to rank them in order of importance. Using the results from these two steps, they were asked to rank the categories from first to eight, most important to least important.

2. to choose two subskills which they thought were the most important for children to learn between the ages of 3 and 5 from the three original categories of skills (above) they had ranked as most important. For example, if preacademic skills had been selected as amongst the top three, the teacher may have selected "to recognise shapes and colours" as one of the most important subskills.

3. to choose from the eight categories of skills the three they believed most of the parents of children in their setting would think were the most important ones for their children to do or learn when they were 4 years old, and to rank them in order of importance.

4. to choose the three categories of skills which they considered most important as part of their responsibility for teaching the children, and to rank them in order of importance.

5. to choose the three categories from the group of eight which they felt were the most important as part of the parents' responsibility for teaching their children and to rank them in order of importance.

***Parents*[1]**

Parents also completed an Expectations questionnaire.

Respondents were asked:

1. to rank the skills from one to eight which they considered important for children to learn between the ages of 3 and 5, in the same manner as the teachers.

2. to choose the two most important subskills from the top three most important skills, for example, if the respondent had chosen 'self-sufficiency skills' as one of his/her three most important categories, he/she may have further defined this by choosing the two subskills 'to play by him/herself', 'to ask for help when needed'.

3. to choose the skills they believed their child's teacher would think were the most important ones for a child to do (or learn) when he or she was 4 years old, and to rank them in order of importance.

4. to choose the three they considered most important as part of their responsibility for teaching their child, and to rank them in order of importance.

5. to choose from the group of eight the three categories that they thought were the most important as part of the teacher' responsibility for teaching their child, and to rank them in order of importance.

6.3 Findings

We present the findings in three sections: firstly, teacher beliefs and expectations, the second section deals with parental expectations, and in the final section we analyse the level of agreement between teachers and parents.

Table 6.1 Percentage of Teachers who Ranked each of the Eight Areas of Development within the Top Three.

Area of Development	Overall	DD Presch	DD Sch	NDD Presch	NDD Sch
Preacademic	34% (N=97)	23% (N=22)	60% (N=25)	25% (N=24)	27% (N=26)
Motor /Physical	16% (N=98)	13% (N=24)	15% (N=26)	17% (N=23)	20% (N=25)
Self-Expression	38% (N=93)	32% (N=22)	40% (N=25)	33% (N=24)	45% (N=22)
Language	61% (N=99)	68% (N=25)	65% (N=23)	52% (N=25)	58% (N=26)
Social Skills with Peers	76% (N=100)	76% (N=25)	72% (N=25)	84% (N=25)	72% (N=25)
Social Skills with Adults	21% (N=92)	33% (N=21)	8% (N=24)	13% (N=23)	29% (N=24)
Self-Sufficiency	41% (N=97)	43% (N=23)	38% (N=24)	48% (N=25)	36% (N=25)
Self-Assessment	32% (N=99)	54% (N=24)	15% (N=26)	32% (N=25)	29% (N=24)

6.3.1 Teacher Expectations

Most important skill

Overall, social skills with peers was chosen most frequently as the most important skill for children to learn by teachers, with 25% of all teachers giving it their top nomination. Looking at this variable by setting, more respondents in the DD and NDD preschool teachers categories and in the NDD school teachers category chose social skills with peers than any other category. Only teachers of children in the DD school category differed - 32% of them chose language skills as most important, with the next highest percentage of respondents choosing social skills with peers (21%). (See Appendix 6, Table 6.1 for detailed breakdown of percentage of teachers voting for each skill in each setting.)

Further analysis allowed us to calculate the percentage of teachers in each of the four settings who ranked each of the eight areas of development within the top three most important skills. The results are presented in Table 6.1.

Least important skill

Twenty percent of teachers ranked self-assessment skills as the least important skill children should learn at this age (See Appendix 6, Table 6.2 for breakdown of nominations by setting).

What teachers believe parents think

Teachers were asked what they thought parents would consider the most important skills to learn. Nearly one-third (31%) of the group overall said that parents would choose preacademic skills as the most important skill. Looking at this variable by setting, 47% of teachers in DD preschools, 32% of teachers in DD schools and 30% of teachers in NDD schools said that parents would choose preacademic skills. The NDD preschool category differed, with social skills with peers and self-sufficiency skills being

Table 6.2 Subskills Within Areas of Development

Area of Development	Two subskills most frequently voted as either most or second most important for each of the categories.
Preacademic	• to concentrate and focus his/her attention on a task or activity (e.g. to listen attentively to stories, to complete a worksheet). • to build with or manipulate small objects (e.g. lego, stringing beads, puzzles, etc).
Motor/physical	• to run, skip, jump. • to throw, kick, hit, or catch a ball.
Self-expression	• to manipulate sensory materials (e.g. playdough, clay, sand, finger-paint). • to play imaginatively with toys.
Language	• to communicate his/her feelings in words. • to engage in conversation with peers and adults
Social skills with peers	• to play cooperatively with other children. • to initiate interactions with other children and to form friendships.
Social skills with adults	• to be cooperative with adults • to initiate interactions with adults/to listen carefully to adults.
Self-sufficiency	• to attend to his/her personal needs (e.g. use the toilet, wash hands or face, brush teeth). • to ask for help when needed/to recognise and avoid dangerous behaviours, objects and products in the environment.
Self-assessment	• to feel good about him/herself. • to be aware of his/her own emotions and to feel comfortable expressing them appropriately.

Note: respondents only identified a most or second most important subskill for those categories which they identified within their top three.

nominated by 24% of teachers in each case. In other words, 24% of teachers in NDD preschools said parents would choose social skills with peers and a further 24% of these teachers said parents would choose self-sufficiency skills. (See Appendix 6, Table 6.3, for a complete breakdown.)

What teachers consider their responsibility

Teachers were asked what they considered their responsibility to teach. While more of the group as a whole chose social skills with peers (24%) than any other category, there were differences between preschool and school teachers. Social skills with peers was the category chosen most frequently by the teachers at both DD and NDD preschool settings (35% of these two categories nominated it most important), while preacademic skills was the category chosen most frequently by the teachers at DD and NDD school settings (36% of these two categories nominated it most important). (See Appendix 6, Table 6.4, for a complete breakdown.)

What teachers consider parental responsibility

Teachers were asked what they considered to be the parents' responsibility for teaching their children. More of the group as a whole chose self-sufficiency skills (27%) than any other category. (See Appendix 6, Table 6.5, for a complete breakdown of nominations by setting.)

Subskills

Teachers were asked to further define the three areas they ranked as most important, by selecting important subskills from a list of subskills for each area. Table 6.2 lists the two subskills most frequently voted as either most or second most important for each of the categories.

6.3.2 Parent Expectations

Most important skill

Parents were asked which skills they considered most important for their children to learn between the ages of three and five. While the group as a whole chose social skills with peers most frequently (24% gave it their top nomination), there were differences between parents of children from DD and NDD settings. Social skills with peers was chosen most frequently by NDD school and preschool setting parents with 25% nominating this skill, while preacademic skills was chosen most frequently by DD school and preschool parents - 27% nominated this skill as most important. (See Appendix 6, Table 6.6, for a complete breakdown.)

Least important skill

Overall, more respondents chose motor/physical skills than any other category (36%) as the least important skill for children to learn. (See Appendix 6, Table 6.7, for a complete breakdown.)

What parents believe teachers think

Parents were asked which skills they believed their children's teachers would value as most important for children to learn. While the group as a whole chose preacademic skills most frequently (26% nominated this skill as most important) there were differences between parents of children attending preschool and schools settings. Preacademic skills was the category chosen most frequently by parents of children attending school settings, with 31% nominating it as the skill category they believed their children's teachers would value as most important for children to learn. Social skills with peers was the category chosen most frequently by parents of children attending preschool settings (30%). (See Appendix 6, Table 6.8, for a complete breakdown.)

What parents consider their responsibility

Parents were asked which skills they considered to be their own responsibility for teaching. Overall, 33% ranked preacademic skills as most important as part of their responsibility for teaching their children. (See Appendix 6, Table 6.9, for a complete breakdown.)

What parents consider teacher responsibility

Parents were asked which skills they felt it was the teachers responsibility to teach. Overall, more parents chose social skills with adults than any other skill. Social skills with adults was the category chosen most frequently by parents of children attending school settings, with 28% nominating this skill category. Language skills was the category chosen most frequently by the parents of children attending DD preschools (20%). Social skills with peers was the category chosen most frequently by the parents of children attending NDD preschools (31%). (See Appendix 6,Table 6.10 for a complete breakdown.)

Teacher and Parent Expectations: Summary

1. Overall, both groups - teachers and parents - chose social skills with peers most frequently as the most important skill for children to learn between the ages of three and five. However, there were differences between parents of children attending DD and NDD settings; parents of children attending NDD settings chose social skills with peers, while parents of children attending DD settings chose preacademic skills.

2. Overall, teachers chose self-assessment skills as the least important ones, while parents chose motor/physical ones.

3. Overall, teachers said that parents would consider preacademic skills to be the most important skills for children to learn. Similarly, parents believed teachers would consider preacademic skills most important. However, there were differences between parents of children attending preschool and school settings. Parents of children attending preschool settings said that teachers would consider social skills with peers most important, and parents of children attending school settings said that teachers would consider preacademic skills most important.

4. Teachers in preschool settings considered it their responsibility to teach social skills with peers and teachers in school settings considered it their responsibility to teach preacademic skills. Overall, parents considered it their responsibility to teach preacademic skills.

5. Overall, teachers considered parents to be responsible for teaching self-sufficiency skills. Overall, parents considered teachers to be responsible for teaching social skills with adults.

6.3.3 Level of Agreement

The level of agreement between the teachers' expectations and the parents' expectations was also analysed. In the following section, overall levels of agreement for all the variables and levels of agreement with respect to the top three categories nominated by parents are reported.

What parents and teachers think are the most important skills

Overall, of the total sample of parents (359) who specified an objective, 54 had a teacher who *agreed* with them, i.e. there were 54 agreements (15%) between teachers and parents with respect to what they considered to be the most important skill for children to learn between the ages of three and five years. Out of 95 parents from the total sample who said social skills with peers were the most important skills they wanted their children to learn between the ages of three and five, 23 (24%) had a teacher who *agreed* with them. Out of 77 parents from the total sample who said preacademic skills were the most important skills, only nine (12%) had a teacher who *agreed* with them. Out of 53 parents from the total sample who said self-assessment skills were most important, five (9%) had a teacher who *agreed* with them.

What teachers think is the most important skill for children to learn between the ages of three and five and what skills parents believe the teachers consider to be most important.
Overall, of the 311 parents from the total sample who specified an objective, i.e. what they believed teachers would consider to be most important, 35 (11%) had a teacher who agreed with them. Eighty parents *predicted* that teachers would consider preacademic skills to be most important, but only five (6%) had a teacher who actually agreed that preacademic skills are the most important. Sixty-six parents *predicted* that teachers would consider social skills with peers to be most important and 15 (23%) of these had a teacher who agreed. Fifty-three parents *predicted* that teachers would consider self-expression skills most important, but only two (4%) had a teacher who agreed.

Teachers' beliefs about what parents think are the most important skills for children to learn and parents' actual beliefs regarding what is most important
Of the 347 parents from the total sample who nominated a top priority, 51 (15%) had a teacher who agreed with them. Ninety-five parents said social skills with peers was most important and eleven of these (12%) had a teacher who had *predicted* this. Seventy-seven parents said preacademic skills were most important and 23 of these (30%) had a teacher who had *predicted* this. Fifty-three parents said self-assessment skills were most important and two (4%) had a teacher who had *predicted* this.

What parents and teachers think is least important
Looking at what both teachers and parents considered the least important skills for their children to learn, out of a total of 338 parents who specified an objective, there were 61 agreements, i.e. 61 (18%) had a teacher from the total sample who *agreed* with them. Out of 138 parents who said motor/physical skills were least important, 29 (21%) had a teacher who *agreed* with them. Out of 42 parents from the total sample who said self-expression skills were least important, 4 (10%) had a teacher who agreed with them. Out of 35 parents who said self-assessment skills were least important, 17 (49%) had a teacher who *agreed* with them.

Responsibility for teaching

What teachers consider the most important skill they should be responsible for teaching is and what parents think is teachers' most important responsibility for teaching.
Overall, there were 35 agreements in 313 parents who nominated a top priority, i.e. 35 (11%) had a teacher who agreed with them. Of the 70 parents who said social skills with adults were the teacher most important responsibility for teaching, none had a teacher who agreed. Of the 62 parents who said social skills with peers were the teacher's most important responsibility for teaching, 17 (27%) had a teacher who agreed. Of the 49 parents who said self-assessment skills were the teacher's most important responsibility for teaching, two (4%) had a teacher who agreed with them.

What parents consider the most important skill it is their responsibility to teach and what teachers think is the most important skill for parents to teach their children.
Overall, of the 313 parents from the total sample who specified the most important skill they considered it their responsibility to teach, 41 (13%) had a teacher from the total sample who agreed with them that this was the most important skill for parents to teach. Of 101 parents who said preacademic skills were the most important skills as part of their responsibility to teach, 11 (11%) had a teacher who agreed that this was the most important skill for parents to teach. Of the 54 parents who said social skills with peers was the most important skill for them to teach, 12 (22%) had a teacher who agreed. Of the 53 parents who said self-expression skills were the most important skills for them to teach, 2 (4%) had a teacher who agreed.

6.4 Discussion

Findings tend to support the literature which suggests that teachers disagree with a strong emphasis on academics. More teachers as a group nominated social skills with peers (76%) and language skills (61%) as amongst the three most important skills they felt children should learn between the ages of three and five. Only 34% of the group as a whole nominated preacademic skills within their top three. However, looking at what teachers felt was their responsibility to teach, differences emerged between the school and preschool settings. Overall, more school teachers believed their responsibility was to teach preacademic skills than any other skill. Preschool teachers, on the other hand, nominated social skills with peers most frequently as their responsibility. Thus, while we have an overall picture of a body of teachers disagreeing with a strong emphasis on academics for 3 to 5-year-old children, teaching preacademic skills is a high priority in the curriculum of the primary school teachers. Whether or not this is evident in teachers' practice is investigated in Chapter 7. Specific information regarding whether or not teachers felt under pressure from either parents or principals to achieve progress in the basic academic skills was not sought in the present study, though this is a factor which has been revealed in other studies (see Bennett & Kell, 1989).

In investigating differences between DD and NDD settings, results show that teachers of children in DD school settings chose language skills as the most important skill (out of the eight identified skills), whereas teachers in the remaining three settings chose social skills with peers.

Overall findings indicate that parents placed greater emphasis on academics than did teachers. However, there were differences between the parents of children in DD and NDD settings with the former choosing preacademic skills as the most important skill for children to learn between the ages of three and five, the latter choosing social skills with peers. One possible explanation for the emphasis on preacademic skills among DD settings could be a belief among parents of the importance of education (perceived in academic skills terms) as a means of improving social status and a path out of poverty. A further explanation could be that parents receive this message either directly or indirectly from the teachers in DD settings. This area needs further study.

One of the aims of the section of the study outlined in this chapter was to investigate the degree of perceived ideological harmony between parental expectations and teachers' expectations. The analyses allowed us to look in greater detail at the level of congruence between parents and teacher by investigating the exact number of agreements between teachers and parents on a number of questions. Findings show a sample of teachers and parents disagreeing on a range of issues when asked to nominate each other's primary responsibilities. While more teachers as a group considered self-sufficiency skills as the parents' responsibility, more parents themselves nominated preacademic skills as their most important responsibility to teach their children. Only 11% of these parents had a teacher who agreed with them. Similarly, there was evidence of incongruity of beliefs between teachers and parents in what was considered the teacher's responsibility. For example, of the 70 parents who said that social skills with adults were the teacher's most important responsibility for teaching, none had a teacher who agreed. This low level of congruence between Irish teachers and parents is more extreme than that found in the US and Swedish studies referred to in Section 6.1 (see Knudsen-Lindauer & Harris, 1989; Carlson & Stenmalm, 1989).

However, in examining NDD preschools alone, there is evidence of agreement between parents and teachers, with more of both groups choosing social skills with peers than any other skill as the teacher's responsibility. This agreement was also evident when identifying the most important skill for the children to learn between the ages of three and five. Thus, it would seem that there is more harmony between teachers and parents in NDD preschools than in the remaining settings, DD preschools, NDD and DD schools.

In investigating the exact level of agreement over all settings with respect to the top three skills which children should learn, we found a low level of agreement between parents and teachers. For example: out of 77 parents who said preacademic skills were most important, only 9 (12%) had a teacher who agreed with them. Taking all the areas of development together, out of 359 parents who specified an objective (i.e. what they felt it was most important for their children to learn), there were 54 agreements, i.e. 54 parents (15%) had a teacher who agreed with them. These findings would seem to indicate an element of conflict between teacher expectations and those of parents. Whether this conflict has positive or negative consequences for a child, as Karwowska-Struczyk (forthcoming) has argued, depends on factors such as the individual child or the family unit.

In summary, therefore, results indicate that teachers disagreed with a strong emphasis on academics when asked to nominate the three most important skills they felt children should learn between the ages of 3 and 5. However, there were differences between preschool and primary school teachers in terms of what they considered their most important responsibility to teach. Whether teachers' expectations relate to how they ask children to spend their time in a setting will be examined in the following chapter.

Summary

- Overall, results indicate that teachers disagreed with a strong emphasis on academics. Seventy-six per cent of teachers nominated social skills with peers, 61% nominated language skills and only 34% nominated preacademic skills amongst the three most important skills they felt children should learn between the ages of 3 and 5.
- There were differences between preschool and primary school teachers in terms of what they considered was their most important responsibility to teach. More preschool teachers nominated social skills with peers, while more school teachers nominated preacademic skills.
- Overall, it appeared that parents placed greater emphasis on academics than did teachers. This was especially evident in DD settings.
- Looking at all settings as a group, there was a low level of agreement between parents and teachers both in relation to their respective responsibilities to teach children and also in what they felt it was most important for children to learn. However, among NDD preschools there was some evidence of ideological harmony between parents and teachers.

1 The child's mother or father usually completed the questionnaire. However, other relations, for example grandparents, were permitted also.

CHAPTER 7 | OBSERVING CHILDREN AND ADULTS

One of the most exciting components of the IEA Preprimary Project is its use of observation. While observational studies have been carried out in small-scale research projects in Ireland, this is the first nationwide observational study to be undertaken which also includes findings from questionnaire-type data and child development status tests.

The findings from the direct observations of teachers and randomly sampled children in each setting are of major importance in understanding the quality of learning opportunities offered to the children. Knowing what training the staff receive, what parents' and teachers' expectations are and what equipment is available, are all important components in understanding the quality of early education. However, the key component, it could be argued, is knowing from observation exactly what a teacher does in a classroom and what the children's experiences are. Management of Time, Child Activities, and Adult Behaviour observation systems were specifically designed by the National Research Committees of the IEA Preprimary Committee under the direction of the International Co-ordinating Committee (ICC) to obtain this critical information.

This chapter presents the findings from the observation systems implemented in the four types of settings identified for the Irish study: non-designated disadvantaged (NDD) preschools, designated disadvantaged (DD) preschools, NDD schools and DD schools. It is organised as follows: The literature review section highlights important issues in observational research and reviews Irish and British observational studies. The next section describes the observation systems, and data collection procedures. The findings section which follows is divided into three sections and the chapter concludes with a discussion.

7.1 Literature Review

Naturalistic observation is where spontaneous behaviour is observed in a familiar environment such as the home or a preschool (Hayes, 1993). The advantages of this procedure are that it yields information about behaviour in the real world and allows for the detailed description of what a child or a teacher is actually doing in different situations.

Properly conducted observational research is formal and structured and so has statistical validity. The disadvantages are that it does not assess maximum performance, because, unlike a test, the observer is not posing problems. Also, because there are no requests for particular behaviours, it is possible that certain abilities will not be observed and it cannot be assumed that the child does or does not have them in her repertoire. However, Bronson (1994) argues that although the difficulties associated with using observational techniques in evaluations are well known, for example, the amount of time and money required, the reliability element (in terms of observers and behaviour samples), the effects of classroom differences or constraints and the possibility of disruption caused by the presence of an observer in the classroom, interest in their use has been renewed for a variety of reasons. For example,

> *Classroom observations avoid the problems associated with testing young children in formal situations, and allow assessment of the natural flow of behaviour and integration of social-emotional and cognitive functioning. Observational techniques can also facilitate the inclusion of process variables such as choice of activities, level of involvement, persistence, and use of strategies in social and cognitive problem-solving. Assessing the young child's functioning in the natural setting also enhances ecological validity and may contribute to pedagogic and program planning. (Bronson, 1994, p. 22)*

Sylva and her colleagues in the Oxford Preschool Project developed observation in a natural setting to a high level. For their studies they identified a Target Child (TC) and observed this child in particular. According to Sylva, Roy and Painter (1980), the target child technique has its roots in science, but focuses on the child in his/her routine environment, playing with everyday materials, and talking with daily companions. While the TC Observation Schedule was originally designed to study children's concentration in preschools, it has since been adapted successfully by other researchers to study children's play, child-teacher interaction and children's behaviour in day nurseries, preschools and primary schools (Jowett, 1981, Hayes, 1983, Horgan, M.A., 1987, Dunlea, 1990, Douglas, 1993, and Horgan, S, 1995).

While most national educational research in Ireland tends to be survey rather than observationally-based, extensive observational research studies have been carried out in Cork city and county by Horgan, M.A. 1987, Dunlea, 1990, Douglas, 1993 and Horgan, S. 1995. The findings of these studies have been brought together in the INTO document, *Early Childhood Education*, 1995. In total, 427 children were observed continuously for over 143 hours in a variety of early education settings, including Junior Infant classes in primary schools, Montessori schools, playgroup classes and Junior Infant classes in Gaelscoileanna. These studies found highest cognitive challenge (i.e. overt goal directedness) in Montessori groups, possibly accounted for by the direct nature of the Montessori method, and most language activities in Gaelscoileanna, which could be accounted for by the particular focus that Gaelscoileanna have on language skills. The studies also found child-to-child interaction infrequent in all settings, with children in Junior Infant classes spending more time sitting passively side-by-side than in any other social context.

Whilst a survey of junior infant teachers in Ireland (the findings are also presented in the above report) focusing on teaching styles found that the teachers' preferred styles were often constrained by situational factors (INTO, 1995) such as overcrowded, badly-equipped classrooms, the authors make the point that

> *these obstacles can occasionally be surmounted by teachers whose unwavering belief in the child's need for activity, exploration ... somehow enables them to provide highly structured, yet eminently flexible, environments. (INTO, 1995, p.67)*

Similar research has been conducted in Britain by Bennett and Kell (1989) in a study of 4-year-olds in 60 schools in three different local education authorities. They interviewed teachers and head-teachers and conducted in-depth observations of children in their classrooms. They found the links between some teachers' intentions and the activities planned for the children to be somewhat tenuous, but in general, teachers knew what they wanted to do and were able to plan accordingly.

However, the emphasis on play was found to be very weak; teachers appeared to have low expectations of it, often acting as a time-filler, and very often there was no clear purpose or challenge, a lack of pupil involvement, very little monitoring or attempt at extension. The importance of adult-child interaction for extending the child's intellectual and social development was not evident in Bennett and Kell's observations.

While accepting that demands on teachers of 4-year-olds are enormous and that "they cannot possibly be doing all things and be in all places at the same time" (Bennett & Kell, 1989, p.82), the authors do identify elements of successful management strategies for maintaining pupil involvement, such as a high level of teacher awareness of monitoring classroom events.

Hutt, S.J. Tyler, Hutt, C. and Christopherson, (1989) also investigated the role of the adult in early education settings, primarily by means of two observational studies. Amongst their findings was that involvement of adults in children's activities is both limited and brief. For example, they found most adult activity spans to be less than a minute, and interruption from other children or other staff members often resulted in the termination of involvement with a single child. Children's attention spans tend to be short at this age and the authors argue that matching the adult participation spans to them seemed to be a useful strategy. However, they acknowledge that a "spatial and a temporal rearrangement of duties" (for the adult) might promote more effective learning for those children who require longer periods of concentrated work and interaction with the teacher. In practice, this would involve two or three adults working with a group of children taking on clearly different but complementary roles for certain periods of the day.

In summary, recent observational studies in Ireland and Britain have focused on child and teacher behaviours within their everyday classroom environment. The findings from studies conducted in Ireland have revealed quite significant differences between various kinds of early education settings in terms of child activities, interaction and classroom management.

7.2 Observation Systems and Data Collection

The focus of the observations in the IEA Preprimary project were the four target children in each setting (see Section 3.3) in addition to the teacher in each sampled preschool or school i.e. 396 children and 109 teachers. Observations took place over a period of 2 to 4 days, depending on the number of target children in a particular school/preschool. The observations were intended to yield information on the following:

- teacher's management of time
- child activities
- adult behaviour

In order to make their observations, the data collector positioned him/herself in a place where he or she could clearly see and hear both the main adult and the children to be observed, while at the same time remaining unobtrusive.

- ***The Management of Time (MOT) Observation system*** provided a complete picture of how the adult organised the children's time during a morning. The International Co-ordinating Committee (ICC) suggested that the observer conduct the MOT observation (1) simultaneously with Child Activities, Adult Behaviour and during breaks between each instrument, (2) for two days, and (3) for a maximum of three to three-and-a-half hours per day if possible. The focus of the observation was the adult's organisation of the children's time. Each activity proposed by the adult was noted, as well as the type of child involvement proposed (e.g. was the child listening or watching, participating or doing) and the time of each change of activity. In addition, the group structure was noted for each activity, i.e. whether the adult proposed the activity for the whole group, part of the group, a child with one other child or adult, or one child alone.[1]

- ***The Child Activities Observations*** were recorded on two days with at least 20 minutes per day of observation, divided into two 10-minute observation periods conducted at two different times of the child's day. The data collector completed the observation simultaneously with Management of Time.

Forty minutes was spent observing Child Activities for each target child during the two days, yielding a total of 80 observation episodes per child. The activities of the target child were the focus of the observation and were recorded at thirty-second intervals. In addition, whether the child was talking, listening or watching, participating or doing, the number of children, adults or both, the child was interacting with, and whether the activity was adult or child-directed or suggested, was recorded. In total, 29,280 observation episodes were recorded (80 observations for 366 children)[2], representing 244 hours of observation.

• ***The Adult Behaviour Observations*** were made of one adult per setting on two days, with at least 20 minutes per day of observation. The data collector completed this observation simultaneously with Management of Time. A total of 40 minutes were spent observing Adult Behaviours for the primary adult during the two days. All activities of the primary adult in the setting were the focus of the observation, regardless of whether or not a behaviour directly involved the children. In addition, for each behaviour the adult's degree of involvement with the children was indicated, for example, whether the adult was involved in a separate activity from the children, whether the adult was present watching the children but not directly relating to them, whether the adult was offering more support to the children than a mere neutral presence, whether the adult was addressing the group for an extended period of time, whether the adult was participating actively in the children's activities.

It was important to conduct the observations on two non-consecutive days in order to capture the variation of the programme. A typical Observations data collection schedule from one setting is illustrated in Appendix 7, Figure 7.1.

7.3 Findings

Because of the complexity and volume of the observations, this section of the chapter is divided into three parts:

- Management of Time Observations
- Child Activity Observations
- Adult Behaviour Observations

Note: The visual representation of information presented in the Findings section is based upon data analyses carried out at the High/Scope Educational Research Foundation, Ypsilanti, Michigan. Tables in the Findings are reproduced by kind permission of the Foundation.

7.3.1 Management of Time Observations

Type of Activity - How teachers proposed children should spend their time

As can be seen in Figure 7.1 teachers in DD and NDD schools proposed that on average more time (30% and 40% respectively) be spent in preacademic activities than in any other category of activity. Preacademic activities are defined by the ICC to include activities which promote the learning of basic concepts in reading, storytelling/language, writing, number/math concepts, physical science/environment, social science/environment. This finding is not surprising given that more teachers considered preacademic skills their responsibility to teach than any other skill (see Section 6.3.1).

Teachers in DD and NDD preschools proposed more time (23% and 36% respectively on average) be spent in mixed activities than in any other category of activity. Mixed activities as defined by the ICC refer to how the adult organises or proposes several simultaneous activities from which the children can choose or through which they are asked to progress (rotate from one activity to the next). An exam-

ple might involve the adult preparing an art activity, setting up musical instruments and providing play props for children engaged in dress-up. Children are allowed participate in only those three activities organised by the adult. Also, mixed activities were coded by data collectors when activities overlapped or when one activity began and ended within the timeframe of the next activity. For example, cleaning up materials from a previous activity when a reading lesson had already started.

It is interesting to note the low percentage of time in school settings and to a lesser extent, in preschools, proposed to be spent in free, expressive and physical activities. Teachers in schools propose that children have free choice in their activity for only 7% of the total time. In preschools, teachers propose free choice activities for 18% of the total time. The difference between schools and preschools in relation to the amount of time proposed for free activities is surprising if only for the fact that overall schools have a longer operating day than preschools (see Section 5.3.6). Further study investigating the place of free choice activities in early childhood settings in Ireland would be worthwhile.

The findings also indicate that the expressive arts i.e. Arts and Crafts, Music and Dramatic Play, is a neglected area in all settings. Overall, teachers propose this activity on average just 9.5% of the total time. In NDD preschools the percentage of time proposed for expressive arts on average is 7%, in DD preschools 10%, in NDD schools 7% and in DD schools 14%. Interestingly, teachers in all settings proposed social activities just 1% of the total time despite selecting social skills with peers as the most important skill for children to learn between the ages of three and five. A complete table of management of time percentages (mean %, median %, % range) for major and sub-categories of activities is provided in Tables 7.1 and 7.2.

Figure 7.1 Management of time (schools)

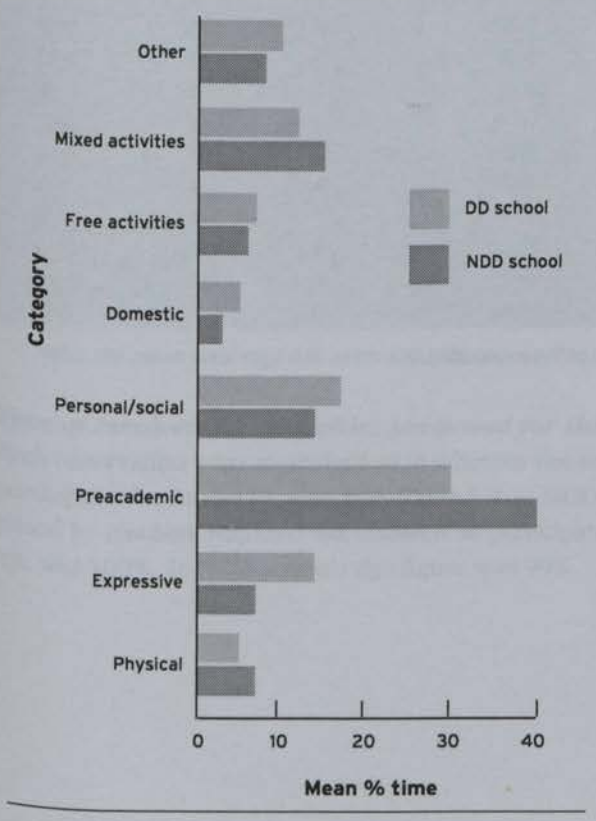


Figure 7.2 Management of time (preschools)

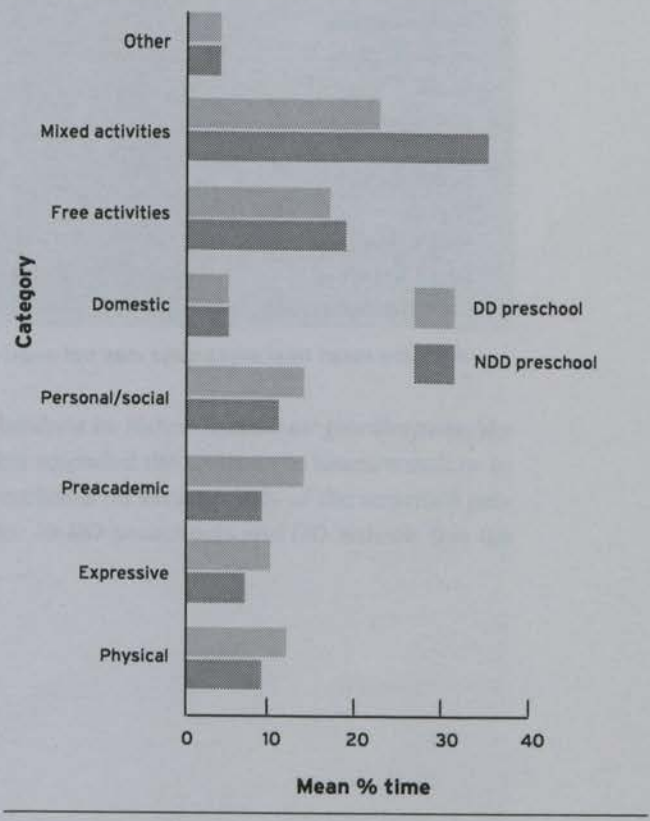


Table 7.1 Management of time %s (mean, range and median) for major categories of activities in DD schools and NDD schools

	DD Schools (N=26 settings 167 hours)			NDD Schools (N=26 settings 156 hours)		
Category	**Mean %**	**Median %**	**% Range**	**Mean %**	**Median %**	**% Range**
Physical	**5**	**0**	**0-19**	**7**	**4**	**0-22**
Gross motor	3	0	0-19	5	1	0-22
Fine motor	2	0	0-18	2	0	0-16
Expressive	**14**	**13**	**0-35**	**7**	**7**	**0-25**
Dramatic play	0	0	0-1	1	0	0-8
Arts and Crafts	10	7	0-25	5	2	0-17
Music	4	4	0-17	1	0	0-14
Preacademic	**30**	**26**	**2-57**	**40**	**39**	**16-80**
Reading	6	4	0-19	8	8	0-23
Storytelling/language	7	5	0-17	9	6	0-26
Irish language	3	2	0-12	5	1	0-49
Writing	4	3	0-12	8	5	0-27
Numbers/math	7	6	0-21	9	6	0-34
Physical science	1	0	0-9	1	0	0-4
Social science	0	0	0-3	0	0	0-7
Other	2	0	0-11	0	0	0-3
Religious/Ethics	**2**	**1**	**0-11**	**3**	**1**	**0-21**
Media-Related	**2**	**0**	**0-13**	**1**	**0**	**0-8**
Personal/Social	**17**	**18**	**3-32**	**14**	**13**	**1-39**
Personal Care	15	16	0-32	13	12	0-38
Social	1	0	0-7	1	0	0-4
Discipline	1	0	0-6	0	0	0-2
Domestic	**5**	**4**	**0-22**	**3**	**2**	**0-12**
Transitional	**4**	**0**	**0-27**	**3**	**1**	**0-11**
Waiting	**2**	**1**	**0-11**	**1**	**0**	**0-8**
Free Activities	**7**	**6**	**0-34**	**6**	**3**	**0-30**
Mixed Activities	**12**	**9**	**0-28**	**15**	**13**	**0-44**
Other/no information	**0**	**0**	**0-0**	**0**	**0**	**0-0**

Note: the mean total percentage may not equal 100, due to rounding

Table 7.2 Management of time %s (mean, median, range) for major categories of activities in NDD and DD preschools

	NDD Preschools (N=25 settings 125 hours)			DD Preschools (N=24 settings 126 hours)		
Category	**Mean %**	**Median %**	**% Range**	**Mean %**	**Median %**	**% Range**
Physical	9	6	0-30	12	11	0-68
Gross motor	3	2	0-21	5	0	0-24
Fine motor	6	0	0-28	7	0	0-68
Expressive	7	5	0-32	10	5	0-40
Dramatic play	1	0	0-14	1	0	0-8
Arts and Crafts	3	0	0-21	6	2	0-28
Music	3	3	0-10	3	2	0-16
Preacademic	9	7	0-32	14	12	0-29
Reading	1	0	0-6	2	0	0-11
Storytelling/language	6	4	0-23	6	6	0-20
Irish language	0	0	0-0	0	0	0-0
Writing	0	0	0-0	1	0	0-12
Numbers/math	1	0	0-5	2	0	0-14
Physical science	1	0	0-25	2	0	0-16
Social science	0	0	0-1	0	0	0-0
Other	0	0	0-8	1	0	0-24
Religious/Ethics	0	0	0-4	0	0	0-2
Media-Related	0	0	0-0	1	0	0-25
Personal/Social	11	11	0-31	14	14	0-38
Personal Care	10	10	0-27	13	13	0-31
Social	1	0	0-8	1	0	0-17
Discipline	0	0	0-4	0	0	0-3
Domestic	5	4	0-18	5	5	0-10
Transitional	3	1	0-36	2	0	0-25
Waiting	1	0	0-2	1	0	0-5
Free Activities	19	17	0-70	17	8	0-75
Mixed Activities	36	33	0-86	23	19	0-62
Other/no information	0	0	0-0	0	0	0-5

Note: the mean total may not equal 100, due to rounding

Type of Involvement - Activities proposed for the children to listen/watch or participate/do

Each observation was categorised as to whether the teacher intended the children to listen/watch or to participate/do. As can be seen from Table 7.3, in NDD preschools on average, 92% of the activities proposed by teachers required the children to participate/do. In DD preschools and DD schools this figure was 100%. In NDD schools this figure was 99%.

Table 7.3 Type of involvement intended for teacher-proposed activities in DD/NDD preschools/schools

Setting Type	Listen/Watch Mean %	Listen/Watch Range %	Participate/Do Mean %	Participate/Do Range %	N settings	N hours
NDD Presch	8	0-87	92	13-100	25	125
DD Presch	0	0-0	100	100-100	24	126
DD Sch	0	0-0	100	100-100	26	167
NDD Sch	1	0-8	99	92-100	26	156

The total number of hours proposed by teachers in each of the main categories of activity, and the percentage of each activity category which involved listening/watching or participating/doing in each of the four setting types, are presented in Tables 7.4, 7.5, 7.6 and 7.7.[3]

Table 7.4 Type of involvement intended for each type of teacher-proposed activity in NDD preschools (N=25 settings, 125 hours)

Category	N hours	% Listen/Watch	% Participate/Do
Overall	**125**	**8**	**92**
Physical	11	6	94
Expressive	9	6	94
Preacademic	11	33	67
Religious/ethics	1	-	-
Media-related	0	-	-
Personal/social	14	4	96
Domestic	6	5	95
Transitional	3	8	92
Waiting	1	-	-
Free activities	24	0	100
Mixed activities	45	5	95
Other/no information (NI)	0	NI	NI

Note: A dash indicates total number of hours too small for a meaningful type of involvement percentage.

Table 7.5 Type of involvement intended for each type of teacher-proposed activity in DD preschools (N=24 settings, 126 hours)

Category	N hours	% Listen/Watch	% Participate/Do
Overall	**126**	**0**	**100**
Physical	14	0	100
Expressive	13	0	100
Preacademic	17	0	100
Religious/ethics	0	-	-
Media-related	1	-	-
Personal/social	18	0	100
Domestic	6	0	100
Transitional	4	0	100
Waiting	1	-	-
Free activities	22	0	100
Mixed activities	30	0	100
Other/no information (NI)	0	NI	NI

Note: A dash indicates total number of hours too small for a meaningful type of involvement percentage.

Table 7.6 Type of involvement intended for each type of teacher-proposed activity in NDD schools (N=26 settings, 156 hours)

Category	N hours	% Listen/Watch	% Participate/Do
Overall	**156**	**1**	**99**
Physical	9	0	100
Expressive	12	0	100
Preacademic	62	1	99
Religious/ethics	6	2	98
Media-related	2	-	-
Personal/social	22	0	100
Domestic	4	0	100
Transitional	4	0	100
Waiting	2	-	-
Free activities	10	0	100
Mixed activities	23	0	100
Other/no information (NI)	0	NI	NI

Note: A dash indicates total number of hours too small for a meaningful type of involvement percentage.

Table 7.7 Type of involvement intended for each type of teacher-proposed activity in DD schools (N=26 settings, 167 hours)

Category	N hours	% Listen/Watch	% Participate/Do
Overall	**167**	**0**	**100**
Physical	9	0	100
Expressive	24	0	100
Preacademic	49	0	100
Religious/ethics	3	0	100
Media-related	3	0	100
Personal/social	30	0	100
Domestic	7	0	100
Transitional	6	0	100
Waiting	3	0	100
Free activities	14	0	100
Mixed activities	19	0	100
Other/no information (NI)	0	NI	NI

Note: A dash indicates total number of hours too small for a meaningful type of involvement percentage.

These findings would seem to indicate that the majority of teachers in all settings intend that the children take an active part in classroom activities rather than a passive/watching role.

Group structure of proposed activity

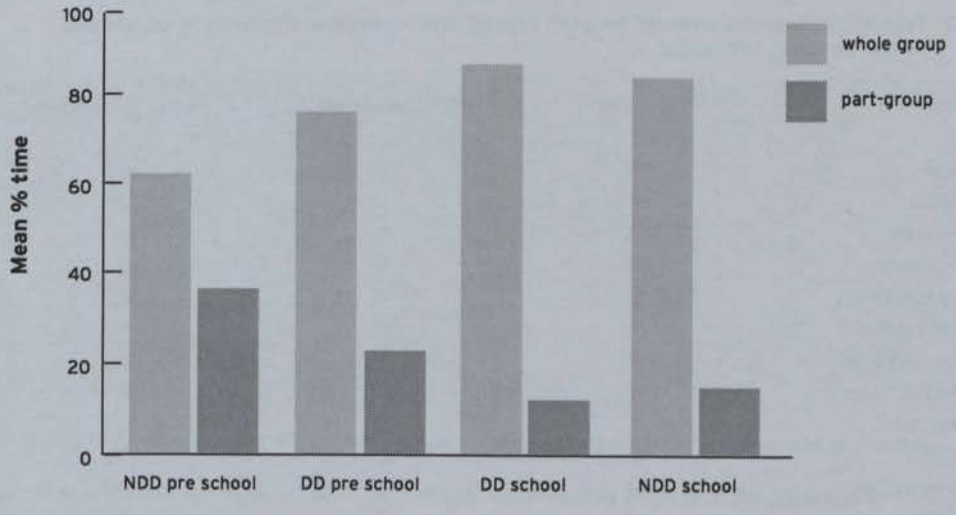
For each observation the type of group structure proposed for that activity was noted, for example, was the target child involved in an activity as part of the whole group of children or in a sub-group of children. As can be seen in Figure 7.3, in each of the four kinds of settings, on average, teachers proposed that children spend more time in whole group activities (activities proposed for all children) than in partial group activities (activities proposed for at least three children but not the whole group). The extent of the difference in time between time spent in whole groups as opposed to part groups varied between settings.

In NDD preschools, teachers on average proposed whole group activities 63% of the time; in DD preschools this figure was 77%; in DD schools, 88% and in NDD schools this figure was 85%. These figures indicate that children attending a school setting are more likely to be in whole groups than children attending preschool settings. Teachers in schools could well argue that whole group structure is the best possible classroom management strategy given the average teacher-child ratios of 1:28 and 1:29 which we found in DD and NDD schools respectively (see Section 5.3.2)

It was interesting to note that overall preschool teachers proposed whole group structures on average 70% of the time, given that in most of these settings there was a second adult present. This needs further study.

(The mean %, median % and % range of time spent in various group structures at each setting are presented in Appendix 7, Tables 7.1, 7.2, 7.3, and 7.4. The group structures intended for each major type of teacher proposed activity in all settings are presented in Appendix 7, Tables 7.5 and 7.6.)[4]

Figure 7.3 Group structures in schools and preschools



7.3.2 Child Activities Observations

Type of activity - How children spent their time in each of the four settings

Looking at the overall picture of child activities in the four settings, fairly significant differences did emerge between schools and preschools. Though there were some differences between DD and NDD schools and between DD and NDD preschools, the overall pattern of the types of activities children engaged in were the same within the school settings and within the preschools settings.

As can be seen in Table 7.8, on average children in DD and NDD school settings were observed in preacademic activities more frequently than in any other activity category (29% and 36% respectively). Preacademic activities were taken to include reading, storytelling/language, writing, numbers/maths, physical science and social science. This finding would seem to reflect the fact that more teachers considered preacademic skills their responsibility to teach than any other skill (see Section 6.3.1).

Looking at DD and NDD school settings separately, differences do emerge between the number of observations in the expressive and personal/social categories with children in DD schools spending more times in these activities. For example, 14% of observations of children in DD schools were in the social category: in NDD schools this figure was 9%. This could be seen to reflect the belief of teachers in DD schools of the importance of language skills and social skills with peers (see Section 6.3.1). However, more time was spent on reading and storytelling/language activities in NDD schools than DD schools.

The overall pattern of child activities in preschools was that of more time spread evenly over physical, expressive and personal/social activities (see Table 7.9). Although there was a difference between DD and NDD preschools in relation to preacademic activities (14% and 9% respectively), preacademic activities were not a prominent activity, as was evident in school settings.

In DD preschool settings, on average 25% of the observations were in physical activities, and in NDD settings this figure was 29%. It is of note that Physical Activities were taken to include gross motor activities - active movement using legs, arms, head and/or body - for example, running, jumping, climbing, football, chasing games, gymnastics, building with large blocks *and* fine motor activities - using hands, feet, fingers and toes - for example, stringing beads, playing with sand, water, handling a small object, building with lego.

Although the overall time spent not actively engaged (i.e. inactively waiting, wandering aimlessly, sitting or standing alone unoccupied) was relatively low in all settings, 13% of the total observations fell into this category in schools; in preschools, this figure was 9%. Hence, though it was the teacher's intention that children be participating/doing 98% - 100% of the time (see Section 7.3.1.), in practice this did not happen. This in part could be explained by the large adult-child ratios in the school settings. It would be interesting to further investigate this category of activity in primary classroom settings with significantly- reduced adult-child ratios (as per Breaking the Cycle classrooms for example, see Section 2.3).

Caution in interpretation is necessary as it could also be argued that children perceived to be 'not actively engaged' may in fact be reflecting or resting, which could be viewed as valuable activities in their own right. This area needs further study.

Figure 7.4 Child activities (schools)

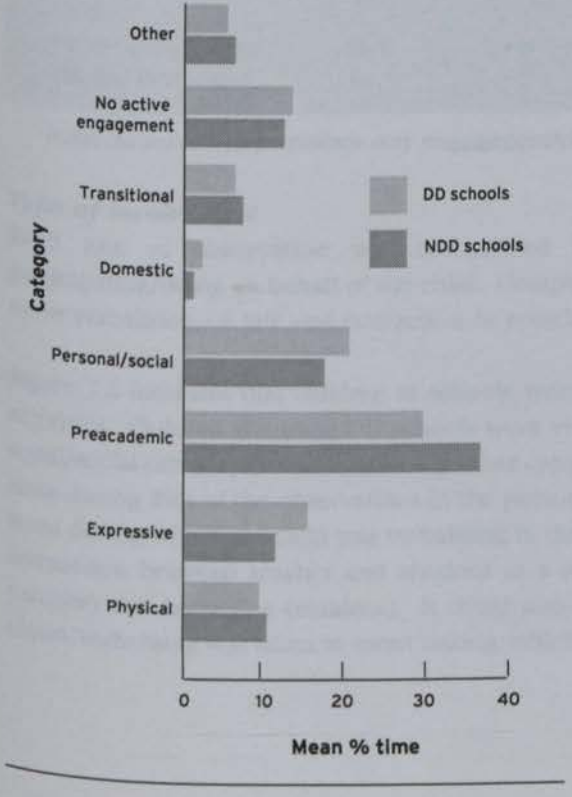


Figure 7.5 Child activities (preschools)

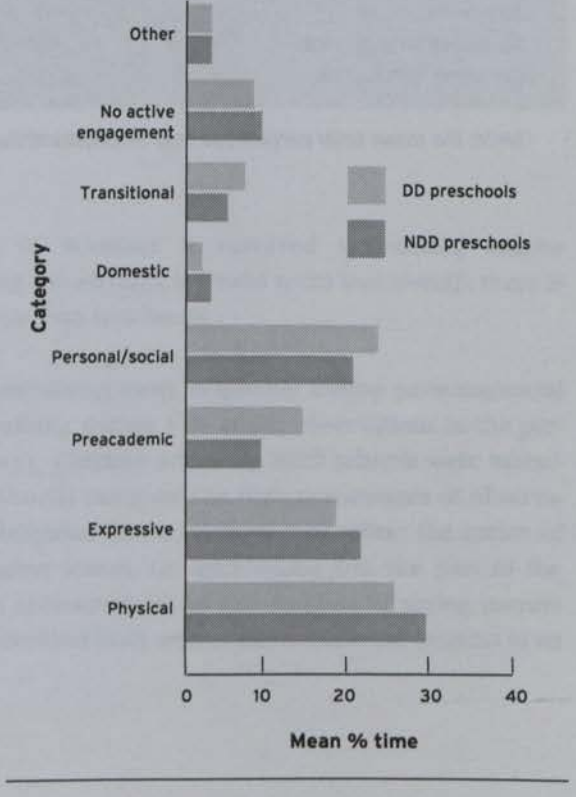


Table 7.8 % of observations in each major child activities category in NDD and DD schools

	DD Schools (N=94 children, 7,520 entries)			NDD Schools (N=91 children, 7,280 entries)		
Category	**Mean %**	**Median %**	**% Range**	**Mean %**	**Median %**	**% Range**
Physical	9	6	0-41	10	3	0-48
Gross motor	2	0	0-28	4	0	0-35
Fine motor	7	0	0-39	6	0	0-48
Expressive	15	14	0-60	11	9	0-49
Dramatic play	2	0	0-26	2	0	0-24
Arts and Crafts	9	6	0-56	7	3	0-48
Music	4	0	0-28	2	0	0-20
Preacademic	29	29	0-76	36	35	6-83
Reading	6	1	0-46	8	3	0-41
Storytelling/language	4	0	0-34	8	3	0-54
Irish language	3	0	0-29	4	0	0-43
Writing	5	0	0-30	7	0	0-39
Numbers/math	9	5	0-51	8	1	0-48
Physical science	1	0	0-19	1	0	0-16
Social science	0	0	0-11	0	0	0-24
Other	1	0	0-20	0	0	0-16
Religious/ethics	1	0	0-21	1	0	0-16
Media-related	2	0	0-25	2	0	0-25
Personal/social	20	18	1-56	17	16	0-58
Personal care	4	1	0-21	7	4	0-33
Social	14	11	0-56	9	8	0-29
Discipline	2	0	0-20	1	0	0-10
Expressions of emotion	0	0	0-8	1	0	0-18
Positive	0	0	0-5	0	0	0-8
Negative	0	0	0-5	1	0	0-18
Domestic	2	0	0-24	1	0	0-8
Transitional	6	5	0-30	7	5	0-27
Accidents	0	0	0-3	0	0	0-4
No active engagement	13	13	0-43	12	11	0-45
Other/no information	2	1	0-9	2	0	0-16

Note: the mean total percentage may not equal 100 due to rounding.

Table 7.9 % of observations in each major child activities category in NDD and DD preschools

	NDD Preschools (N=90 children, 7,200 entries)			DD Preschools (N=91 children, 7,280 entries)		
Category	**Mean %**	**Median %**	**% Range**	**Mean %**	**Median %**	**% Range**
Physical	29	26	1-88	25	23	0-100
Gross motor	7	1	0-55	5	1	0-35
Fine motor	22	21	0-74	20	18	0-100
Expressive	21	20	0-63	18	15	0-64
Dramatic play	12	8	0-63	9	1	0-64
Arts and Crafts	6	0	0-35	6	0	0-38
Music	3	0	0-24	3	0	0-29
Preacademic	9	4	0-58	14	11	0-68
Reading	2	0	0-49	2	0	0-26
Storytelling/language	4	0	0-36	5	0	0-44
Irish language	0	0	0-0	0	0	0-3
Writing	0	0	0-11	1	0	0-23
Numbers/math	2	0	0-25	2	0	0-41
Physical science	1	0	0-29	3	0	0-48
Social science	0	0	0-13	0	0	0-0
Other	0	0	0-5	1	0	0-25
Religious/ethics	0	0	0-3	0	0	0-5
Media-related	0	0	0-9	0	0	0-14
Personal/social	20	20	0-51	23	20	0-70
Personal care	6	3	0-35	9	5	0-49
Social	13	13	0-36	13	11	0-46
Discipline	1	0	0-11	1	0	0-14
Expressions of emotion	2	0	0-16	2	1	0-15
Positive	1	0	0-13	1	0	0-5
Negative	1	0	0-14	1	0	0-11
Domestic	3	2	0-31	2	0	0-14
Transitional	5	4	0-31	7	5	0-26
Accidents	0	0	0-4	0	0	0-4
No active engagement	9	9	0-30	8	9	0-25
Other/no information	1	0	0-19	1	0	0-6

Note: the mean total percentage may not equal 100 due to rounding.

Type of involvement

Each line of observation was categorised as to whether it involved verbalising and/or participating/doing on behalf of the child. Comparing the settings, it would seem that overall, there is more verbalising, i.e. talk and interaction, in preschools than in schools.

Figure 7.6 indicates that children in schools were verbalising most frequently during personal/social activities. Children attending DD schools were verbalising during 41% of the observations in the personal/social category (more than in any other category). Children attending NDD schools were verbalising during 29% of the observations in the personal/social category. The high percentages of observations during which the child was verbalising in the Religious/Ethics category may reflect the nature of interaction between teacher and children in a religion lesson, i.e. questioning (on the part of the teacher) and answering (children). It could also be accounted for by the practice of saying prayers aloud. Verbalising was taken to mean talking, which occurred both within and outside the context of an

activity, for example, a child may have been talking while participating in a colouring activity, or alternatively, may have been talking to his/her friend and not engaged in any activity.

Figure 7.6 Verbalising (schools)

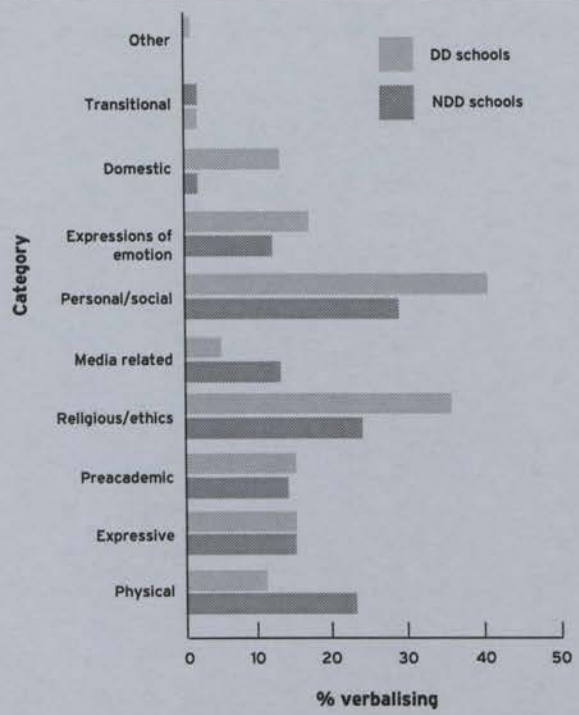


Figure 7.7 indicates that children in NDD preschools were verbalising during 49% of personal/social activities (more than in any other activity category), and children in DD preschools were verbalising during 39% of the time when they were expressing emotion (more than in any other activity category). Personal/social activities included personal/care activities and social activities; personal/care activities included toileting, washing hands or face, social activities included sharing, talking to others, asking questions, requesting permission. Expressions of emotion could be positive, for example, hugging, being kind to other children, or negative, for example, screaming, biting, teasing.

Figure 7.7 Verbalising (preschools)

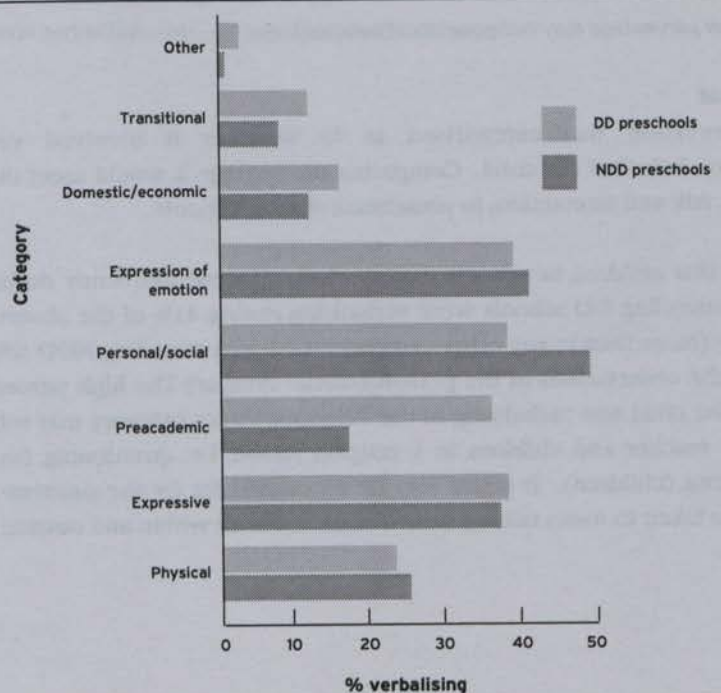
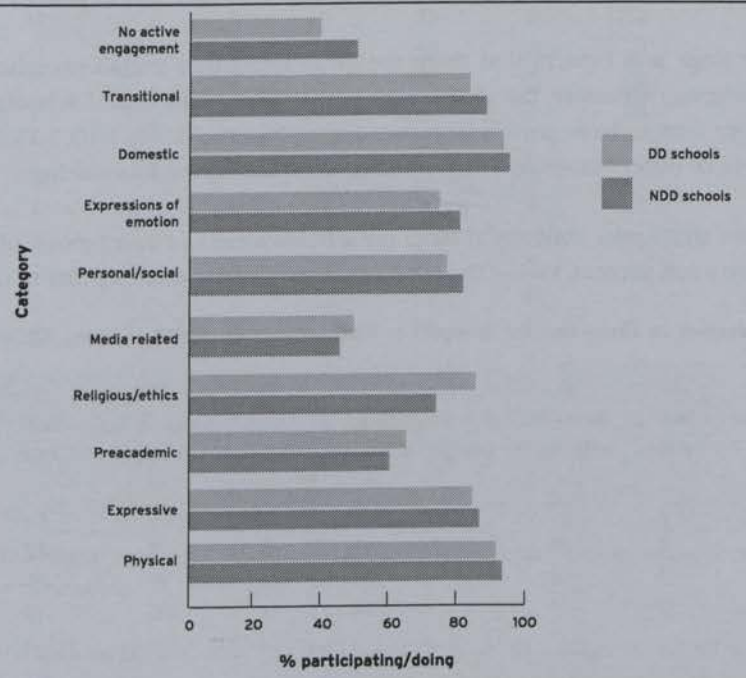


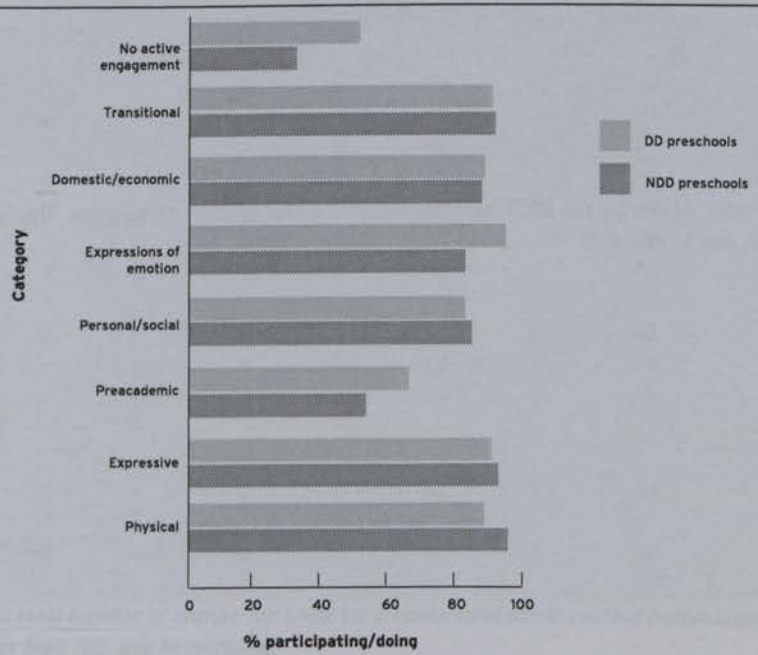
Figure 7.8 indicates that the percentages of observations in schools during which children were participating/doing were quite high in most categories and highest in the domestic category. Domestic activities included tasks such as tidying up, meal preparation and distributing toys or materials[6]. It is of note that for 35% and 40% of preacademic activities, children in DD and NDD schools respectively, were not participating/doing despite the intention of teachers that children take an active part rather than a passive/watching role in all activities (see MOT findings, Section 7.3.1).

Figure 7.8 % of observations during which child was participating/doing in schools



The percentages of participation/doing in preschool observations were also quite high overall (see Figure 7.9). In common with the school setting findings, % participation/doing for preacademic activities in particular were comparatively low (66% for DD preschools and 53% for NDD preschools).

Figure 7.9 % of observations during which child was participating/doing in preschools



Group Structure - Social context of activity

Each child activity observation was categorised as to whether the child was: alone with no adult present, as he or she carried out the activity; with another child; with a child and with an adult; in a small group of between two and six children; in a small group with an adult present or nearby; in a large group of seven or more children; in a large group with an adult present or nearby; with one or more adult(s); in a class group but not participating; physically/verbally responding in unison with all or most of the class group during a lesson. If the data collector did not have enough information at the time to record one or more of the types of information related to, or including, the target child's activity he/she coded 'II'.

Comparing the settings, it is evident that there are great similarities within preschool and school settings in relation to group structure, but differences between preschools and schools, with school children spending more time in large groups than preschool children. Tables 7.10, 7.11, 7.12 and 7.13 present the percentage of observations by social context category in the four settings.

Table 7.10 indicates that target children in NDD preschools were in a small group of between two and six children with an adult present 39% of the time, i.e. for 39% of the total number of observations made.

Table 7.10 Percentage of observations by social context category in NDD preschools (N=90 children, 7,200 entries)

	N obs	% Alone	% With Child	% With Child With Adult	% Small Group	% Small Group WithAdult	% Large Group	% Large Group With Adult	% With Adult	% No Group Response	% Group Response	% II
Overall	7,200	1	0	12	0	39	0	22	24	0	2	0
Physical	2,062	0	0	15	0	47	0	11	27	0	0	0
Expressive	1,438	0	1	12	0	44	0	16	23	0	4	0
Preacademic	671	0	0	4	0	22	0	50	19	0	5	0
Religious/ethics	10	-	-	-	-	-	-	-	-	-	-	-
Media-related	7	-	-	-	-	-	-	-	-	-	-	-
Personal/social	1,411	2	0	16	0	38	0	24	18	0	1	0
Expressions of emotion	133	0	0	23	0	35	0	18	24	0	0	0
Domestic	219	0	2	14	0	34	0	25	25	0	0	0
Transitional	367	1	0	9	0	24	0	21	44	0	1	0
Accidents	13	-	-	-	-	-	-	-	-	-	-	-
No active engagement	657	0	0	7	0	36	0	30	26	0	1	0
Other/No information	212	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Note: A dash indicates total number of entries too small for a meaningful social context percentage. The total percentage across the columns may total less than 100, due to rounding.

Table 7.11 indicates that target children in DD preschools were also in a small group with an adult present 39% of the time, i.e. for 39% of the total number of observations made.

Table 7.11 Percentage of observations by social context category in DD preschools (N=91 children, 7,280 entries)

	N obs	% Alone	% With Child	% With Child With Adult	% Small Group	% Small Group WithAdult	% Large Group	% Large Group With Adult	% With Adult	% No Group Response	% Group Response	% II
Overall	**7280**	1	0	11	0	39	0	23	19	1	6	0
Physical	1671	0	0	16	0	49	0	11	23	0	1	0
Expressive	1267	0	0	12	0	36	0	20	15	2	15	0
Preacademic	1070	0	0	7	0	28	0	34	15	3	13	0
Religious/ethics	20	-	-	-	-	-	-	-	-	-	-	-
Media-related	14	-	-	-	-	-	-	-	-	-	-	-
Personal/social	1660	5	0	11	0	45	0	22	15	0	2	0
Expressions of emotion	110	0	0	35	0	26	0	21	15	1	2	0
Domestic	120	0	0	2	0	52	0	15	30	0	1	0
Transitional	488	2	0	7	0	25	0	27	37	1	1	0
Accidents	10	-	-	-	-	-	-	-	-	-	-	-
No active engagement	563	0	0	5	0	37	0	38	19	0	1	0
Other/No information	287	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Note: A dash indicates total number of entries too small for a meaningful social context percentage. The total percentage across the columns may total less than 100, due to rounding.

Table 7.12 indicates that target children in NDD schools were in a large group of seven or more children with an adult present for nearly 50% of the time. Fifty-three per cent of 'No active engagement' observations occurred in the context of 'Large Group with Adult' and 57% of preacademic skills did.

Table 7.12 Percentage of observations by social context category in NDD schools (N=91 children, 7,280 entries)

	N obs	% Alone	% With Child	% With Child With Adult	% Small Group	% Small Group WithAdult	% Large Group	% Large Group With Adult	% With Adult	% No Group Response	% Group Response	% II
Overall	**7280**	1	0	3	0	32	0	50	6	0	8	0
Physical	723	0	0	4	0	26	0	53	4	0	12	0
Expressive	787	0	0	4	0	55	0	23	4	0	13	0
Preacademic	2536	0	0	2	0	25	0	57	4	0	12	0
Religious/ethics	96	0	0	0	0	15	0	43	3	0	39	0
Media-related	119	0	0	0	0	14	0	81	1	0	4	0
Personal/social	1215	3	0	7	0	37	0	45	6	0	2	0
Expressions of emotion	86	0	0	8	0	40	0	47	4	0	1	0
Domestic	80	1	0	5	0	36	0	48	9	0	1	0
Transitional	464	1	0	3	0	29	0	46	19	0	2	0
Accidents	8	-	-	-	-	-	-	-	-	-	-	-
No active engagement	868	0	0	2	0	33	0	53	11	0	1	0
Other/No information	298	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Note: A dash indicates total number of entries too small for a meaningful social context percentage. The total percentage across the columns may total less than 100, due to rounding.

Table 7.13 indicates that target children in DD schools were in a large group with an adult present or nearby 43% of the time, i.e. for 43% of the total number of observations made.

Table 7.13 Percentage of observations by social context category in DD schools (N=94 children, 7,520 entries)

	N obs	% Alone	% With Child	% With Child With Adult	% Small Group	% Small Group WithAdult	% Large Group	% Large Group With Adult	% With Adult	% No Group Response	% Group Response	% II
Overall	**7520**	1	0	4	0	36	0	43	9	0	7	0
Physical	696	0	0	6	0	49	0	30	9	0	6	0
Expressive	1071	0	0	4	0	39	0	41	6	0	10	0
Preacademic	2156	0	0	1	0	30	0	49	7	1	12	0
Religious/ethics	76	0	0	0	0	24	0	17	0	0	59	0
Media-Related	177	0	0	1	0	1	0	53	39	0	6	0
Personal/social	1479	2	0	8	0	44	0	36	7	0	2	0
Expressions of emotion	53	0	0	9	0	45	0	32	9	0	4	0
Domestic	136	1	0	4	0	42	0	24	27	0	2	0
Transitional	453	1	0	2	0	23	0	50	21	0	3	0
Accidents	7	-	-	-	-	-	-	-	-	-	-	-
No active engagement	972	0	0	3	0	36	0	48	12	0	1	0
Other/No information	244	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI

Note: A dash indicates total number of entries too small for a meaningful social context percentage. The total percentage across the columns may total less than 100, due to rounding.

Table 7.14 indicates that the target children in each of the four types of setting spent most of their time *not interacting* with any other adults or with any other children. Hence, as can be seen in Tables 7.10, 7.11, 7.12 and 7.13, while children were practically always observed to be in a room with at least one adult present, they were most often not interacting with her. Also, while children were often in large or small groups of other children they were often not interacting with them.

Table 7.14 Percentage of observations in child activities social context interaction categories in DD and NDD preschools and schools

Type of person interacting with	NDD Preschools (N=90 children) (7,200 entries)	DD Preschools (N=91 children) (7,280 entries)	DD Schools (N=94 children) (7,520 entries)	NDD Schools (N=91 children) (7,280 entries)
N Adults	%	%	%	%
0	86	80	88	87
1	10	13	4	5
2 or more	1	0	0	0
Group Response	2	6	7	8
N Children	%	%	%	%
0	71	79	79	82
1	15	10	11	8
2-4	9	4	3	2
5-8	2	0	0	0
Group Response	2	6	7	8

Note: the percentage of social context interactions in a setting may total less than 100 due to rounding or missing data.

Social origin of activity

For each individual child behaviour, the social origin of that behaviour was also recorded. There were four types of social origin listed: adult- directed - the target child's activity was determined by the adult, for example, the child was told to listen to the lesson; adult-suggested - the adult either suggested ideas for an activity or helped extend the child's own ideas; child-suggested - the target child's choice of activity was suggested by another child; child-initiated - the target child suggested his/her own activities without direction from adults or other children.

Table 7.15 indicates that in NDD preschools, more of each of the categories of activities observed were child-initiated than of any other social origin. Seventy-one per cent of all behaviours recorded were child-initiated. This was also the case for DD preschools (see Table 7.16), where 61% of all observations recorded overall were child-initiated. Fifty-eight per cent of all observations recorded in NDD schools (see Table 7.17) were child-initiated, and more of each of the individual categories of activities observed were child-initiated than of any other social origin. This was not the case in DD schools (see Table 7.18). While 54% of all observations recorded were child-initiated, in two of the individual categories, religious/ethics and media-related activities, 46% and 66% respectively were adult-directed[7].

These findings would seem to indicate that a large proportion of child activities in preschools were child-initiated. This was evident to a lesser degree in schools.This could be explained by a management strategy of the teacher whereby she would specify a certain number of possible activities (i.e mixed activities - see section 7.3.1) from which the child could choose and therefore the chosen activity would be seen to be child-initiated.

Table 7.15 Percentage of observations in each social origin category in NDD preschools (N=90 children, 7,200 entries)

Category	N observ-ations	% Adult-Directed	% Adult-Suggested	% Child-Suggested	% Child-Initiated
Overall	**7,200**	**15**	**11**	**3**	**71**
Physical	2,062	13	10	4	73
Expressive	1,438	15	10	3	72
Preacademic	671	18	13	2	67
Religious/ethics	10	-	-	-	-
Media-related	7	-	-	-	-
Personal/social	1,411	15	9	3	73
Expressions of emotion	133	14	14	5	67
Domestic	219	17	14	2	66
Transitional	367	19	11	4	66
Accidents	13	-	-	-	-
No active engagement	657	19	10	2	69
Other/no information (NI)	212	NI	NI	NI	NI

Note: A dash indicates total number of entries too small for meaningful social origin percentage. Total percentage across the columns may total less than 100, due to rounding.

Table 7.16 Percentage of observations in each social origin category in DD preschools (N=91 children, 7,280 entries)

Category	N observ-ations	% Adult-Directed	% Adult-Suggested	% Child-Suggested	% Child-Initiated
Overall	**7,280**	**23**	**12**	**4**	**61**
Physical	1,671	25	14	4	57
Expressive	1,267	25	13	4	58
Preacademic	1,070	31	16	4	49
Religious/ethics	20	-	-	-	-
Media-related	14	-	-	-	-
Personal/social	1,660	19	7	3	71
Expressions of emotion	110	17	8	2	73
Domestic	120	18	10	7	65
Transitional	488	18	12	5	65
Accidents	10	-	-	-	-
No active engagement	563	21	10	5	64
Other/no information (NI)	287	NI	NI	NI	NI

Note: A dash indicates total number of entries too small for meaningful social origin percentage. Total percentage across the columns may total less than 100, due to rounding.

Table 7.17 Percentage of observations in each social origin category in NDD schools (N=91children, 7,280 entries)

Category	N observ-ations	% Adult-Directed	% Adult-Suggested	% Child-Suggested	% Child-Initiated
Overall	**7,280**	**37**	**3**	**1**	**58**
Physical	723	42	1	1	56
Expressive	787	32	5	1	62
Preacademic	2,536	40	3	1	56
Religious/ethics	96	30	1	2	67
Media-related	119	36	3	2	59
Personal/social	1,215	37	3	1	59
Expressions of emotion	86	25	5	1	69
Domestic	80	38	4	1	57
Transitional	464	36	2	1	61
Accidents	8	-	-	-	-
No active engagement	868	33	5	1	61
Other/no information (NI)	298	NI	NI	NI	NI

Note: A dash indicates total number of entries too small for meaningful social origin percentage. Total percentage across the columns may total less than 100, due to rounding.

Table 7.18 Percentage of observations in each social origin category in DD schools (N=94 children, 7,520 entries)

Category	N observations	% Adult-Directed	% Adult-Suggested	% Child-Suggested	% Child-Initiated
Overall	**7,520**	**41**	**3**	**1**	**54**
Physical	696	27	6	1	66
Expressive	1,071	44	2	1	53
Preacademic	2,156	43	3	1	53
Religious/ethics	76	46	4	7	43
Media-related	177	66	1	1	32
Personal/social	1,479	37	4	2	57
Expressions of emotion	53	32	0	2	66
Domestic	136	38	3	2	56
Transitional	453	41	4	1	54
Accidents	7	-	-	-	-
No active engagement	972	45	2	1	52
Other/no information (NI)	244	NI	NI	NI	NI

Note: A dash indicates total number of entries too small for meaningful social origin percentage. Total percentage across the columns may total less than 100, due to rounding.

7.3.3 Adult Behaviour Observations

Type of Activity - How adults spent their time in each of the four settings

There were similarities between NDD and DD school settings and between NDD and DD preschool settings when examining adult behaviours. However, differences arose when comparing preschools and schools. Teachers in schools were observed more often in teaching behaviours than any other category of behaviour, whilst teachers in preschools were observed more often in participation/shared and routine activities (see Figures 7.10 and 7.11).

Teaching behaviours were defined by the ICC as giving/receiving information or knowledge, giving demonstrations, eliciting information or knowledge from the child, eliciting an action or behaviour in the child, offering choices to the child, encouraging the child's activities, providing assistance or clarification and/or suggesting solutions to the child, providing feedback to the child.

Of particular note is the very low percentages of observations that fell into the categories of nurturance/expression of affect in all settings. For example, in NDD preschools an average of 3% (median, 1%) of all adult behaviours fell into this category, in DD preschools this figure was 2% (median, 1%), in NDD schools, 1% (median, 1%) and in DD schools 3% (median, 1%). A detailed breakdown of the percentage of observations (mean, median and range) in each major adult behaviour category and sub-category is provided in Appendix 7, Tables 7.7, 7.8, 7.9 and 7.10.

Figure 7.10 Mean % of observations in each major adult behaviour category (schools)

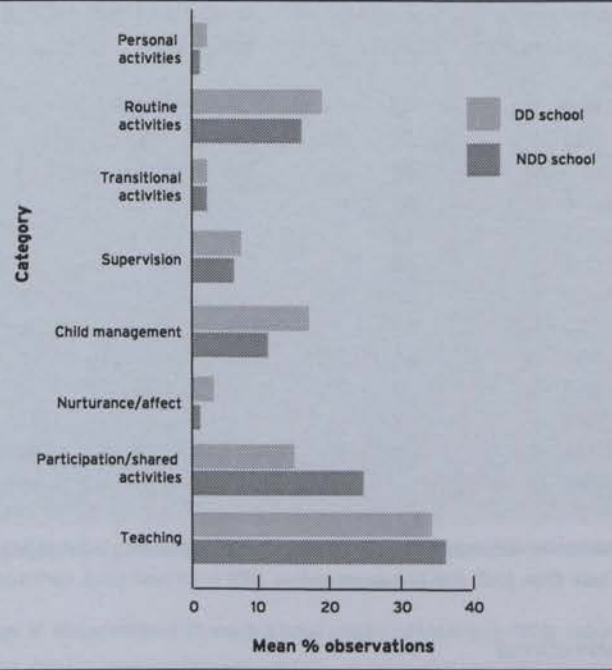
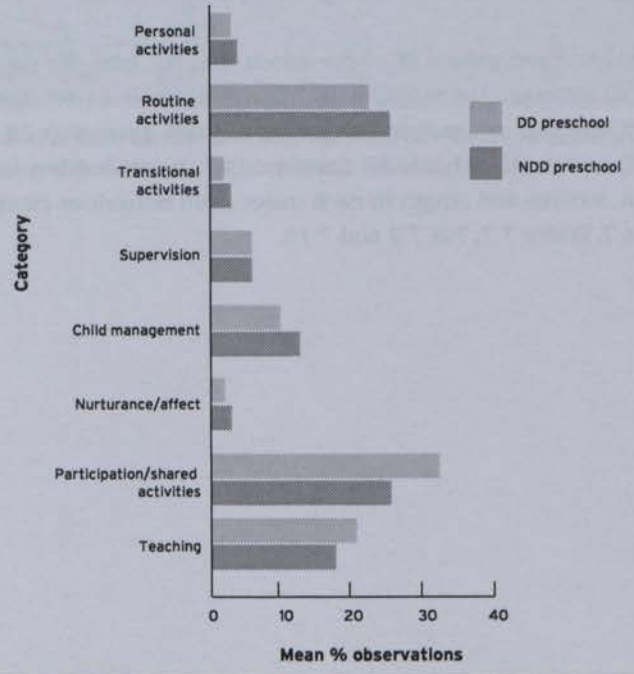


Figure 7.11 indicates that, on average, adults in NDD preschools were observed more often in two behaviour categories - participation/shared activities and routine activities - than in any other behaviour category. Twenty-six per cent of adult observations on average fell into each category (52% in total). Adults in DD preschools on average were observed in participation/shared activities more often than in any other behaviour category (33% of observations). Participation/shared activities included adult behaviours in which the adult was a full participant in the child's activity or in which the adult chose an activity to do with the child. Routine activities encompassed adult behaviours related to programme operation, daily activities and/or smooth operation of the setting, dealing with parents or with staff. The child may or may not have been involved in carrying out these activities.

Figure 7.11 Mean % of observations in each major adult behaviour category (preschools)



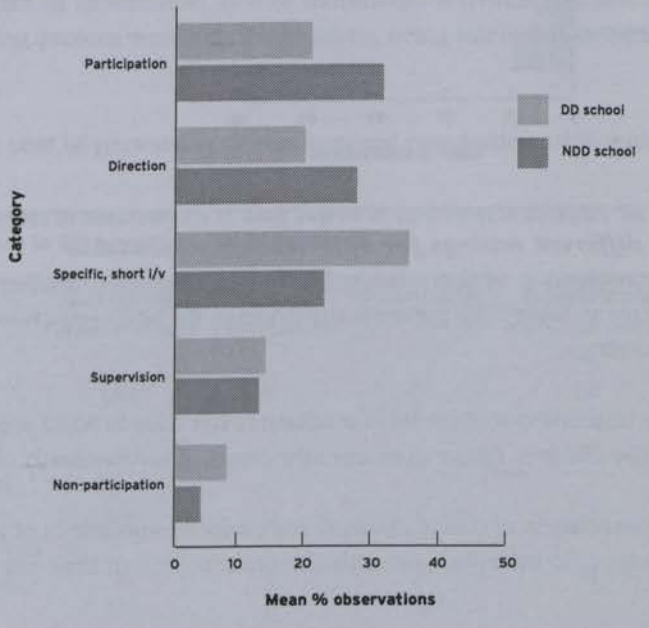
Adults' degree of involvement with children in the settings

For each adult behaviour observation, the degree of involvement that adult had with the children in the setting was recorded. There were five options: non-participation, where the adult was involved in a separate activity from the children and may not be in the same room; supervision, where the adult was present in the setting watching the children but not necessarily interacting with them; specific and short intervention, where the adult moved in and out of children's activities, offering some support to them; direction, where the adult addressed the group for an extended period of time, for example giving instructions; and participation where the adult participated actively in the children's activities.

In common with all other findings from the observations, the differences between school settings and preschool settings were more significant than the differences within preschool settings and school settings. Overall, adult behaviours in preschools were less directive and more participatory than adult behaviours in schools.

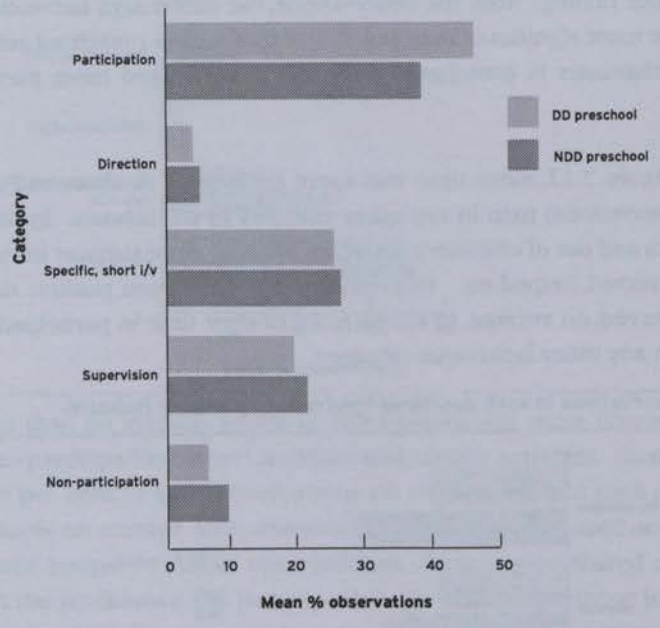
As can be seen from Figure 7.12, more time was spent on average in short and specific intervention behaviours (36% of observations) than in any other category in DD schools. In other words, the adult was observed to move in and out of children's activities, offering more support than a mere neutral presence. She clarified, corrected, helped etc. Intervention may have been positive or negative. Adults in NDD schools were observed, on average, to spend more of their time in participation behaviours (32% of observations) than in any other behaviour category.

Figure 7.12 Mean % of observations in each degree-of-involvement category (schools)



On average adults in NDD and DD preschools spent more of their time participating with children (38% and 46% of observations respectively) than in any other degree of involvement category (see Figure 7.13). In other words, adults spent more of their time actively participating in activities such as dramatic play, singing, art, reading, storytelling, than in any other kind of involvement. Detailed tables showing the mean %, median % and % range of observations in each degree of involvement category are presented in Appendix 7 (Tables 7.11, 7.12, 7.13 and 7.14).

Figure 7.13 Mean % of observations in each degree-of-involvement category (preschools)



Degree of involvement in different settings for each teaching behaviour

The analyses allowed the investigation of the relationship between specific teacher behaviour categories and degree of involvement. Table 7.19 presents the findings for NDD preschools. A selection of the findings include the following:

- Forty-four per cent of the observations of adults in teaching behaviours in NDD preschools involved them participating with the children (more than any other type of involvement).
- Thirty-nine percent of observations of adults showing nurturance/expressions of affect to the children involved short and specific interventions with the children (more than any other degree of involvement).
- Seventy-one per cent of the adults' child management behaviours also involved short and specific intervention.

Eighty-four per cent of personal activities, for example, drinking coffee, making personal phone-calls, leaving the room for breaks, involved non-participation with children, i.e. were separate from the children's activities.

Table 7.19 Percentage of observations in each degree-of-involvement category for each major adult behaviour category in NDD preschools (N=25 teachers)

Category	Total number of observations	% non-participation	% supervision	% specific and short intervention	% direction	% participation
Overall	**2,000**	**9**	**21**	**26**	**5**	**39**
Information/facilitative teaching strategies	376	0	5	34	17	44
Participation/shared activities	506	0	5	6	1	88
Nurturance/expressions of affect	62	0	31	39	1	29
Child management	230	0	4	71	5	19
Supervision	122	4	84	9	1	2
Transitional activities	51	22	43	23	2	10
Routine activities	509	18	39	25	4	14
Personal activities	82	84	8	4	0	4

Table 7.20 presents the findings for DD preschools. Amongst the findings are the following:

- Fifty-five per cent of teaching behaviours and 82% of participation/shared activities of adults in DD preschools involved active participation with children.

- Eighty per cent of supervision, 49% of transitional activities and 38% of routine activities involved the adult being present watching the children, being interested in them, but not directly relating to them.

- Fifty-five per cent of personal activities involved non-participation with children.

Table 7.20 Percentage of observations in each degree-of-involvement category for each major adult behaviour category in DD preschools (N=24 teachers)

Category	Total number of observations	% non-participation	% supervision	% specific and short intervention	% direction	% participation
Overall	**1,920**	**6**	**20**	**26**	**4**	**44**
Information/facilitative teaching strategies	402	0	5	27	13	55
Participation/shared activities	570	0	2	14	2	82
Nurturance/expressions of affect	37	0	3	73	0	24
Child management	186	0	16	56	4	24
Supervision	115	1	80	10	3	6
Transitional activities	39	26	49	5	2	18
Routine activities	443	14	38	32	1	15
Personal activities	56	55	41	4	0	0

Table 7.21 presents findings for NDD schools. Amongst the findings are the following:

- Forty-four per cent of teaching behaviours by adults in NDD schools involved direction, i.e. the adult addressing the group for an extended period of time, giving instructions, explanations or teaching a lesson.
- Sixty-one per cent of nurturance/expression of affect behaviours by adults and 74% of child management adult behaviours involved specific and short interventions.
- Thirty-eight per cent of the adults' routine activities (more than any other type of involvement) involved specific and short intervention, i.e. moving in and out of children's activities.

Table 7.21 Percentage of observations in each degree-of-involvement category for each major adult behaviour activity in NDD schools (N=26 teachers)

Category	Total number of observations	% non-participation	% supervision	% specific and short intervention	% direction	% participation
Overall	**2,080**	**9**	**14**	**36**	**20**	**21**
Information/facilitative teaching strategies	710	0	1	35	44	20
Participation/shared activities	312	0	1	15	11	73
Nurturance/expressions of affect	59	5	22	61	0	12
Child management	352	1	10	74	8	7
Supervision	152	2	67	16	3	12
Transitional activities	52	38	21	29	6	6
Routine activities	389	26	30	32	4	7
Personal activities	47	96	2	0	0	2

Table 7.22 presents the findings for DD schools. Amongst the findings are the following:

- Fifty-five per cent of adult teaching behaviours in DD schools involved direction of the children.
- Seventy-two per cent of adults' supervision activities of the children, 38% of adult transitional activities and 37% of routine activities involved the adult being present, watching the children, interested in them but not directly relating to them.
- Seventy-one per cent of the adults' personal activities involved no participation with the children. A detailed account of percentage of observations in each degree of involvement category broken down by subcategories of adult behaviour in each of the four settings is provided in Appendix 7 (Tables 7.15, 7.16, 7.17 and 7.18)

Table 7.22 Percentage of observations in each degree-of-involvement category for each major adult behaviour category in DD schools (N=26 teachers)

Category	Total number of observations	% non-participation	% supervision	% specific and short intervention	% direction	% participation
Overall	**2,080**	**3**	**13**	**23**	**28**	**33**
Information/facilitative teaching strategies	750	0	2	21	55	21
Participation/shared activities	508	0	1	7	8	84
Nurturance/expressions of affect	27	0	4	44	19	33
Child management	238	0	3	57	24	15
Supervision	116	3	72	10	12	3
Transitional activities	47	23	38	28	9	2
Routine activities	318	12	37	33	8	10
Personal activities	24	71	21	8	0	0

In summary, in examining the degree of involvement for each teaching behaviour in the four setting types, it is apparent that the teaching strategies in the school settings were more directive in nature, whilst in preschool settings, teaching strategies were more participatory. Looking at all adult behaviour categories, the findings indicate that teachers in DD schools are most directive of all. The percentage of direction observations in all but one teaching behaviour category was higher for DD schools than the remaining three setting types.

Another interesting feature of these findings is the percentages of personal activities which are non-participatory. Although this category of behaviour accounts for a very low % of the total observed adult behaviour for all setting types, it is of note that 45% of preschool teachers' personal activities come under either supervision and specific or short intervention. This would seem to reflect that the teachers in this settings have less time by themselves separate from children's activities. The findings in Section 5.3.1 regarding the absence of a separate room for adult use only in many preschools may in part account for this finding.

7.4 Discussion

A general feature of the observations, whether Management of Time, Child Activities or Adult Behaviour, was the great variability between school and preschool settings and the similarity within the schools and preschool settings. Thus, it would seem that 4-year-olds in school settings (whether DD or NDD) have quite a different experience than their counterparts in preschool settings. However, there were some features common to all settings.

The MOT findings indicate that overall, teachers in both DD and NDD school settings proposed the same types of activities for similar percentages of time, with more time being spent on preacademic activities than any other activity. This is despite the fact that overall, the sample of teachers seemed to disagree with a strong emphasis on preacademic skills when asked about the most important skill that children should learn between the age of three and five.

Preschool teachers proposed more time be spent in mixed activities than in any other category of activity, though within the two types of preschools there was some variability, with a greater emphasis on preacademic, expressive and physical activities in DD preschools.

The MOT findings indicate that overall it is the intention of teachers in all settings that children take an active part in classroom activities 100% of the time. However, the findings from the CA observations would seem to indicate that in practice this did not happen. For example, 13% of the total CA observations in DD school settings fell into the category 'no active engagement'. In DD preschools this figure was 8%. It would be worthwhile to further investigate this area to clarify the value or otherwise of what is perceived to be inactivity in early childhood settings and what precisely teachers mean by active participation.

Children in schools are more likely to be in whole (large) group structures than children in preschool settings. There was little variability within the two types of preschool settings in terms of group structures, with target children in DD and NDD preschools observed to be in small groups of between two and six children 39% of the time.

While children in all settings were practically always observed to be in a room with at least one adult present, they were most often not interacting on a one-to-one basis with her. Neither were they

observed to be interacting individually with other children, although they were often in large or small groups of other children. (These findings match similar findings of infrequent child-to-child interaction in the Cork studies reported in Section 7.2.) These results are surprising, given the fact that teachers across all settings regarded social skills with peers as the most important skill for children to learn between the ages of three and five (see Section 6.3.1). The apparent lack of interaction between child and adult and between child and child in all settings requires further analysis for interpretation.

An unexpected finding was the degree to which the activities in preschools and, to a lesser extent, in schools, were child-initiated, i.e. the target child suggested his/her own activities without direction from adults or other children. This would seem to suggest a high level of child autonomy, especially in preschool settings, where, overall, 71% of the total child observations in NDD preschools were child-initiated; in DD preschools this figure was 61%. This finding is somewhat at odds with the AB observations of direction and specific and short intervention behaviours. A broad definition of what was child-initiated was taken by data collectors in this study and included selecting an activity from a limited choice.

The findings from the AB observations would seem to indicate great similarity within school and preschool settings in relation to the type of activity teachers engaged in. Teachers in schools were observed more often in teaching behaviours than any other category, whilst teachers in preschools were observed more often in participation/shared and routine activities. When degree of involvement was investigated, the findings indicate that, overall, adult behaviours in preschools were less directive and more participatory than adult behaviours in schools. Teachers in DD schools were most directive of all. Only very small percentages of observations noted the behaviours of nurturance/expression of affect across all settings, i.e. very few teachers were observed to be engaging in affectionate/friendly behaviour, giving reassurance and support or engaging in negative affective expression behaviour.

The findings in this chapter represent the first broad analysis of the data and provide a wealth of information about the experiences of 4-year-olds and adult behaviours in early childhood educational settings. The findings also highlight similarities and differences between DD and NDD settings and between preschool and school settings. Much of the observational data requires further study for indepth analysis.

Summary

- Observations indicated great variability between school and preschool settings and similarities within the school settings and preschool settings.

Management of Time (MOT)

- The MOT findings indicate that overall, teachers in both DD and NDD school settings proposed the same types of activities for similar percentages of time, with more time being spent on preacademic activities than any other activity.

- Preschool teachers proposed more time be spent in mixed activities than in any other category of activity, though within the two types of preschools there was some variability, with a greater emphasis on preacademic, expressive and physical activities in DD preschools.

- The MOT findings indicate that overall it is the intention of teachers in all settings that children take an active part in classroom activities 100% of the time. However, the findings from the CA observations would seem to indicate that in practice this did not occur.

Child Activities (CA)

- Children in DD and NDD school settings were observed in preacademic activities more frequently than in any other activity category, while children in DD and NDD preschools were observed in physical (gross motor and fine motor) activities more frequently than in any other category.

- Children in schools were more likely to be in whole (large) group structures than children in preschool settings.

- There was little variability within the two types of preschool settings in terms of group structures, with target children in DD and NDD preschools observed to be in small groups of between two and six children 39% of the time.

- While children in all settings were practically always observed to be in a room with at least one adult present, there were few observations of interactions between children and adults. Children in all settings were rarely observed to be interacting individually with other children, although they were often in large or small groups of other children. The apparent lack of interaction between child and adult and between child and child in all settings requires further analysis for interpretation.

- Seventy-one per cent of the total child observations in NDD preschools were child-initiated; in DD preschools this figure was 61%, in NDD schools, 58% and in DD schools, 54%. A broad definition of what was child-initiated was taken by data collectors in this study and included selecting an activity from a limited choice.

Adult Behaviour (AB)

- Teachers in schools were observed more often in teaching behaviours than any other category, whilst teachers in preschools were observed more often in participation/shared and routine activities.

- Overall, adult behaviours in preschools were less directive and more participatory than adult behaviours in schools. Teachers in DD schools were most directive of all.

- Only very small percentages of observations noted the behaviours of nurturance/expression of affect across all settings

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1 Copies of Observation schedules are available upon request from the Early Childhood Research Centre, Dublin Institute of Technology, 143-149 Lr. Rathmines Rd., Dublin 6.

2 Data for 30 children was incomplete or missing.

3 A table containing each of the major categories of behaviour and their subcatagories broken down according to listen/watch and participate/do behaviour is available from the Early Childhood Research Centre upon request.

4 A table of group structure intended for each major type of teacher proposed activity (and subcatagories of activity) at each setting is available upon request from the Early Childhood Research Centre.

5 A table of the percentage of observations in each major activity category and sub-category during which child was verbalised is available upon request from the Early Childhood Research Centre

6 A detailed breakdown pf percentage of observations during which child was participating/doing in each of the major categories and subcatagories of activity is available upon request from the Early Childhood Research Centre.

7 Social origin percentage was not calculated for religious/ethics and media-related activities in preschool settings as the number of entries was too small for meaning.

CHAPTER 8 | CHILD DEVELOPMENTAL STATUS

This chapter presents the findings of the sample children's developmental status in five different areas: cognition, language, fine-motor skills, social competence, and preacademic skills. The measurements provide a snapshot of the developmental status of the sample children at 4 years old. It is of note that the scores are not standardised as it is not the intention to compare children's performance with established test norms. For the purposes of this report, analysis of scoring patterns on each test has three functions:

1 **to describe the developmental status of the different groups in each of the areas of development;**

2 **to examine the interrelationships between a variety of background and setting variables and children's developmental status at age 4 by utilising multi-variate analysis;**

3 **to provide a baseline against which to compare the children's functioning in the phase 3 follow-up. The third phase of the IEA Preprimary Project will investigate the interrelationship of early education experiences, the child's developmental status at age 4, and performance three years later at age 7 (referred to in Chapter 1).**

In discussing developmental status, the following points are worth noting. There is general agreement among developmental psychologists that all children mature in roughly the same sequence, although at different rates, and as children grow they tend to develop in all areas. Some psychologists would argue that development can be viewed as a continuous process in which new attainments in thinking, language and social behaviour are characterised by gradual, steady, small quantitative advances. An alternate view would be that development is uneven and tends to occur in periodic spurts (Butatko and Daehler, 1995). However, age is a significant factor whether we view development as a continuous or a discontinuous process.

The majority of the sample children were aged between 4 years 0 months and 4 years 11 months (a small number fell outside this range) at the time of testing. However, in general, the cohort of children in the preschool settings were younger than their counterparts in primary schools at the time of testing (see Section 3.3 for discussion on the sampling procedures). Overall the mean age of the sample of preschool children was 4.4 whilst the mean age of the primary school sample was 4.7. Because of this difference of age, we expected to find differences in the scoring between the sample of children attending preschool settings and primary school settings.

The chapter begins with a brief literature review, which is followed by a description of each of the five developmental status measures. We then describe the statistical analysis and present the findings. The chapter concludes with a discussion.

8.1 Literature Review

In a review of research on the impact of early learning on children's later development Sylva (1994) argues that the most rigorous studies show that high quality early education leads to lasting cognitive and social benefits in children which persist through adolescence and adulthood. Sylva points out that, rather than focusing on immediate gains in IQ as a justification for investment in early years programmes, the research focus has shifted to the evaluation of the long-term benefits of high quality early education in terms of

1. lifeskills, e.g. learning orientation, self-reliance and seeking challenge;
2. social and economic outcomes, e.g. job prospects.

In *'The Case for a National Policy on Early Education'*, Hayes (1995) refers to the debate about which type of early education is most effective and to research on the factors relevant to predicting the later success of a service. Hayes cites research by Jowett and Sylva (1986) which demonstrates that children who experience active learning, play-based programmes before school entry retain the advantage of their early education.

A further research study which examines the effectiveness of early education is the High/Scope Preschool Curriculum Comparison Study (1997) which compared the short and long-term effects of three different curricula: a High/Scope programme (see Section 5.1), a traditional Nursery School child-centred programme, and a Direct-Instruction (programmed learning). The authors, Schweinhart and Weikart, found that the cohort of children attending these three kinds of programmes all had greatly increased IQ's at school entry. At the follow-up at age 15, however, children who attended the formal Direct Instruction programme engaged in more anti-social behaviour and had lower commitment to school than those who had attended the two programmes based on play. The findings of this study have been replicated in a similar European study carried out in Lisbon, Portugal by Nabuco and Sylva (1995).

Irish research on the effectiveness of preschool education on children's later development has primarily focused on the evaluation of intervention studies aimed at combating educational disadvantage (see Kellaghan & Greaney (1993) for an evaluation of the Rutland Street Project, referred to in Section 1.6).

A further Irish research project followed up a group of 86 children aged between 4 and 11 years who had attended St. Audoen's parent/preschool health promotion project located in a designated disadvantaged school in a deprived area of South Dublin's Inner City. This cohort of children were compared to two other groups of children of the same age-group, one which had had other diverse kinds of preschooling experiences and another group which had had none (O'Flaherty, Fitzpatrick, Hayes & McCarthy, 1994). Results indicated that while there were some differences between the groups which had attended preschool (both St. Audoen's and the other diverse types of preschooling) and the group which had not, in terms of reading levels and social/emotional behaviour at junior infants level in favour of the former, the study failed to find any significant differences with regard to intellectual functioning, social/emotional behaviour and reading ability as the children progressed through primary school. However, it is possible that the effects of the programme have yet to come to light.

O'Flaherty (1995) conducted a follow-up of a group of 22 children who attended a Barnardo's preschool programme in a deprived suburb of west Dublin between 1989 and 1991. This preschool programme which followed the High/Scope curriculum had staff-child ratios of 1:8, a well-resourced setting with adequate access to materials and equipment, and the staff were well-trained. The aims of the study were to monitor the implementation of High/Scope at the preschool, and to see firstly, how well-prepared the preschool graduates were for school, and secondly, to assess how they were performing at school one and two years into primary school as compared to a peer group of children who had experienced other varied kinds of preschooling (*not* the formal High/Scope programme). While no significant differences between the two groups were found at either point (junior or senior infants) the High/Scope group were performing at a level which was on a par with their peer group, and, most importantly, were found to be well-prepared for primary schooling.

In summary, research on the effectiveness of early education has focused on assessing its impact on the future educational and social success of children primarily from disadvantaged backgrounds. High quality play-based programmes, where children experience active learning, have been shown to have a positive impact both in the short and long-term.

As stated in the introduction to this chapter, this phase of the IEA Preprimary Project provides the findings of a series of developmental measures of children both in NDD and DD preschool and primary school settings. It is of note that, unlike many of the experimental studies cited above, the settings in each cell were selected randomly (see Section 3.2) and therefore do not implicitly represent 'good models' of specific programmes; rather, they provide a cross-section of the educational experiences of 4-year-olds in preschool and primary school settings. The value of the measures employed, and the true significance of the differences reported, will become evident at Phase 3 when the children are 7 and will have spent at least 2 years in primary schools.

8.2 Child Development Assessments and Data Collection

The tests were administered to the target children in each setting and assessed the children's performance in each of the following areas:

- cognitive development
- language development
- fine motor skills
- social competence
- preacademic skills

The International Co-ordinating Committee selected test items which were piloted and selected from a variety of standardised tests.[1]

The *cognitive* developmental status measure assessed the children's knowledge and skills in three distinct areas: spatial relations, quantity and time. The assessment required each child to demonstrate an understanding of a wide variety of concepts by performing an action, pointing to a picture, or responding verbally.

The spatial relations portion consists of two distinct parts, requiring different types of responses from the child. In the first part, the child was asked to perform an action as a response to the test question. For example, the data collector showed the child a toy and asked him/her to place it in a particular position or location - ***under*** the chair, ***behind*** the chair. In the second part, the child was asked to indicate which one of a set of pictures fitted the description provided in the test question. For example, the data collector presented the pictures to the child, one at a time, and told the child what to do for each picture card: "point to the jar that is ***between*** the spoons".

Regarding the quantity assessment, the data collector instructed the child as to what to do with a set of pictures, for example: "look at the plates of buns. Point to the plate that has a few buns."

In the time assessment, the data collector firstly asked the child what day of the week it was and if she/he could name any other days. Next, she showed him/her some pictures about which she asked the child some questions. For example, "look at these pictures. Show me the picture of ***night.***"

The *language* developmental status measure assessed the children's verbal skills. The children were required to perform a variety of tasks, for example, answering questions: "what is the name of your favourite story?"; examining picture cards which tested both receptive and expressive language skills, for example, "show me the ball" (receptive language), "I am going to say something. Say it after me. Say it exactly as I say it" (expressive language).

The *fine motor skills* measure assessed children's small-muscle co-ordination. The test required children to perform tasks such as copying shapes, making shapes with clay.

The *social competence* measure assessed two areas: children's social skills and children's social thinking. The *social skills* section consisted of 18 scales: "conversation skills", "borrowing", "playing with oth-

ers", "response to unfamiliar adults", are some examples which assess the child's development and progress in social skills. Each scale further consists of four descriptions of behaviours which represent increasing levels of competence relative to the social skill measured by that scale.

At each of the settings involved in this project, the teacher was required to look at the first scale and decide (for any one child) which of the statements most nearly described the child's behaviour for that particular skill. For example, taking "playing with others", the first description is "child usually plays by her/himself", the fourth description "child usually plays with a larger group (three or more children)".

The *social thinking* section of the measure contained three groups of performance tasks. The first looked at the child's knowledge of self and family by asking the child at each setting questions such as "what is your name?" The second section examined the child's knowledge of other people, and their roles, their awareness of socially-acceptable behaviour, and other people's feelings. For example, a child was asked: "this girl/boy has been naughty at school. What do you think he/she has done?" The third section looked at the child's ideas on time and growth, and how these affect other people, for example each child was asked: "how old are you?"

The *preacademic* assessment looked at the child's numerical ability (for example, rote-counting ability, recognition of numerals, ability to match sets and numerals), prewriting skills (for example, ability to copy and write letters, numerals), prereading skills (for example, the ability to see similarities and differences between pictures).

8.3 Findings

This section presents the breakdown of scoring in each of the five areas by setting type and by gender.[2] Summary statistics - the mean, median, standard deviation, minimum, maximum, range - for each test score are given in Appendix 9. The *original* mean scores for each test are presented graphically in this chapter.

Factors of influence (for example, mother's education level) on test-scoring patterns are also examined. Two linear models *(multiple regression* models) examined the influence of a number of continuous and categorical variables on children's scores. The first model examined the effects of school type (primary or preschool) and the effect of disadvantage (present or absent), controlling for age and sex of the children. We will refer to this model as the setting model. A second model included these four factors plus a range of background factors - hours spent by child in setting each week, number of occupants in the household, birth order, presence of a dictionary in the house, number of years of education of mother, marital status of mother. We will refer to this as the setting+background model; it is an attempt to see how much of the differences between primary and preschool children and between children attending DD and NDD settings can be explained in terms of their backgrounds.

Table 8.1 Significant Differences between the Settings on CDS Measures[3]

		1&2	1&3	1&4	2&3	2&4	3&4	ANOVA Sig
Cognitive Development[1]	*Spatial Relations*				x	x		x
	Quantity	x			x	x		x
	Time	x		x	x	x		x
Language Development		x			x	x		x
Fine Motor Skills		x	x	x	x	x		x
Social Competence	*Social Skills*							
	Social Thinking			x	x	x		x
Preacademic Skills	*Prenumber*	x	x	x	x	x		x
	Prewriting	x	x	x	x	x		x
	Prereading		x	x	x	x		x

Note: 1=Non-Disadvantaged Preschools; 2=Disadvantaged Preschools; 3=Disadvantaged National Schools; 4=Non-Disadvantaged National Schools.

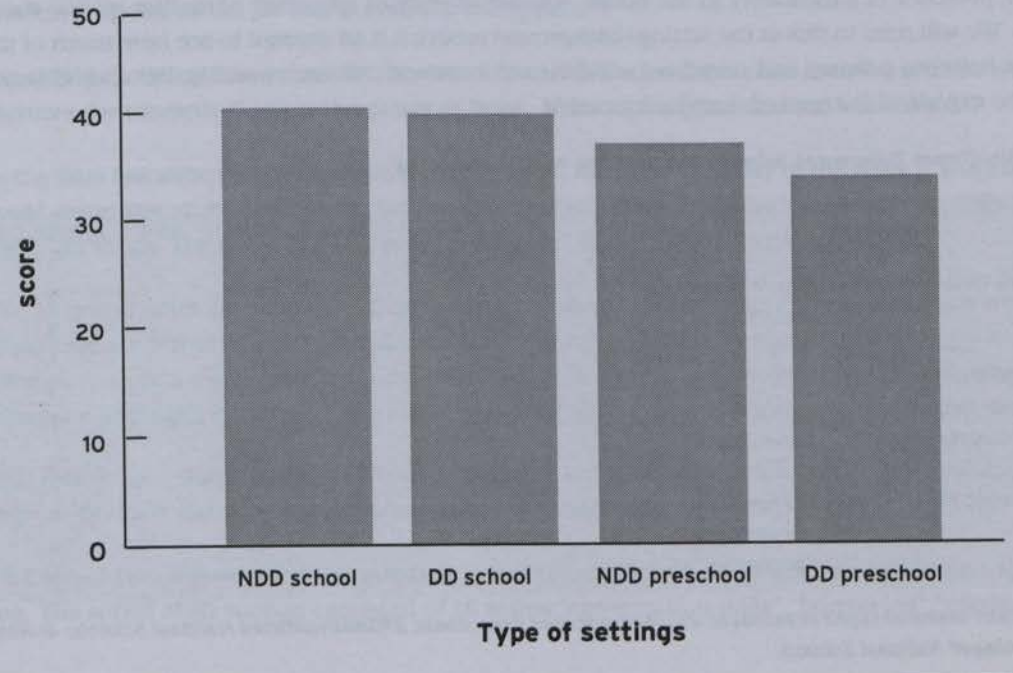
8.3.1 Cognitive Development

This test was divided into three elements: spatial relations, quantity, and time. Out of a possible maximum score of 57 points, the mean score for children attending NDD schools was 41.6 points, for children attending DD schools, 41 points; for children attending NDD preschools, 38.2 points; and for children attending DD preschools, 35 points. Looking at differences between the setting types on each element of the cognitive assessment, we find that there were significant differences in the scores on all three elements between children attending DD preschools and NDD preschools and between children attending DD preschools and NDD schools. There were no significant differences between the scores of children in NDD preschools and children in DD schools and between children in DD schools and NDD schools (see Table 8.1). Overall, while girls scored higher than boys, with 39.3 points as compared to 38.6 points, this difference was not significant.

Table 8.2 Significant Factors of Influence on CDS Measures (Setting + background Model)

	Sex	Prim/Pre.	DD/NDD	Age	Hours in Setting	Occup. in Household	Birth Order	Dictionary	Mother's Education	Marital Status
Cognitive Development	x			x						
Spatial Relations				x				x	x	
Quantity		x		x						
Time		x		x						
Language Development						x		x	x	
Fine Motor Skills		x	x	x			x	x		
Social Competence	x			x					x	
Social Skills	x			x						
Social thinking		x							x	
Preacademic Skills	x	x		x			x			
Prenumber	x							x		
Prewriting	x	x	x	x				x		
Prereading		x				x			x	

Figure 8.1 Cognitive mean scores in each setting



Factors of influence

Cognitive development

Holding age, sex and whether the child was at preschool or primary school constant, the *expected*[5] mean cognitive development score for children attending DD settings was 38.08 and for children attending NDD settings, 40.65 (p=0.0025); hence, there was a significant difference between children attending DD and NDD settings. When the linear model was adjusted to allow for the background factors (listed, see Section 8.2) disadvantage was no longer significant. The likeliest explanation for this is that background factors were causing the difference in scores between children attending DD and NDD settings. or were strongly linked to the actual cause.

Holding age, sex and whether the child was at a DD or NDD setting constant, the expected mean cognitive development score for children attending preschools was 37.84 and for children attending primary schools, 40.89 (p=0.0024); hence, there was a significant difference between children attending preschool and primary school settings. When the linear model was adjusted to allow for background factors, this difference remained significant; the expected mean cognitive development score for children attending preschool settings was 35.84, and for children attending school settings was 39.99.

Holding sex and type of setting (preschool or school, DD or NDD) constant, age of child was found to have a significant effect (p=0.0007); every one-month increase in age produced a difference of 0.4034 points on cognitive scores. When the linear model was adjusted to allow for background factors this difference was still significant (p=0.0006). Every one-month increase in age produced a difference of 0.4414 points on cognitive scores.

Presence of a dictionary in the home and years of education of mother are possible explanations for the differences in scoring (found in the setting model only) between children attending DD and NDD settings. The expected mean cognitive score for children with a dictionary in the home was 39.42, for children without 36.41 (p=.0167). For every one year increase in mother's level of education there was a corresponding increase of 0.4189 points in the child's cognitive development score.

Spatial Relations

Holding age, sex and whether the child was at preschool or primary school constant, the expected mean spatial relations score for children attending DD settings was 20.64 and for children attending NDD settings 21.74 (p=0.0139); hence there was a significant difference between children attending DD and NDD settings. When the linear model was adjusted to allow for the background factors, differences in scoring between DD and NDD settings became statistically non-significant.

Holding sex and type of setting (preschool or school, DD or NDD) constant, age of child was found to have a significant effect (p=0.0016); every one-month increase in age produced an increase of 0.1981 points on scoring on the spatial relations test. When the linear model was adjusted to allow for background factors this difference was still significant (p=0.0007). Every one-month increase in age produced a difference of 0.225 points on spatial relations test scores.

As was the case with cognitive development scores, it is likely that presence of a dictionary in the home and educational level of mother are explanations (or linked to the cause) for the differences between children attending DD or NDD settings (found in the setting model only). In the setting+background linear model, both had a significant effect on the children's scores, p=.0042 (dictionary), p=0.0217 (education of mother). For every one-year increase in the level of mother's education, scoring increased by

0.2113 points. The mean spatial relations score for children who had a dictionary in the home was 21.36, for children without 19.51.

Quantity

Holding age, sex and whether the child was at preschool or primary school constant, the expected mean quantity test score for children attending DD settings was 9.683, for children attending NDD settings, 10.46 (p=0.0030). Hence, there was a significant difference in scoring between children attending DD and NDD settings. When the linear model was adjusted to allow for background factors, disadvantage was no longer significant.

Holding age, sex and whether the child was at a DD or NDD setting constant, the expected mean quantity test score for children attending preschool settings was 9.624, for children attending school settings, 10.52 (p=0.0039); hence, there was a significant difference between children attending preschool and primary school settings. When the linear model was adjusted to allow for background factors, this difference remained significant. The expected mean quantity test score for children attending preschools was 9.27, for children attending schools, 10.36, when background factors were held constant.

Holding sex and type of setting (preschool or school, DD or NDD) constant, age of child was found to have a significant effect (p=0.0081). Every one-month increase in age produced a difference of 0.0966 points on quantity scores. When the linear model was adjusted to allow for background factors, this difference remained significant (p=0.0051). Every one-month increase in age produced a difference of 0.1135 points on quantity test scores.

Time.

Holding age, sex and whether the child was at preschool or primary school constant, the expected mean score on the time test for children attending DD settings was 7.759 and for children attending NDD settings was 8.45 (p=0.0318); hence, there was a significant difference in scoring between children attending these two types of settings. When the linear model was adjusted to allow for background factors this difference was no longer significant.

Holding age, sex and whether the child was at a DD or NDD setting constant, the expected mean time test score for children attending preschools was 7.395 and for children attending primary schools was 8.813 (p=0.0002); hence, there was a significant difference between children attending preschool and primary school settings. When the linear model was adjusted to allow for background factors, this difference remained significant (0.0267). The expected mean time test score for children attending preschool settings was 6.925 and for children attending school settings was 8.401, when background factors were held constant.

Holding sex and type of setting (preschool or school, DD or NDD) constant, age of child was found to have a significant effect (p=0.0154). Every one-month increase in age produced a difference of 0.1087 on time scores. When the linear model was adjusted to allow for background factors, this difference remained significant (p=0.0356). Every one-month increase in age produced a difference of 0.1028 on time test scores.

Cognitive Development Summary

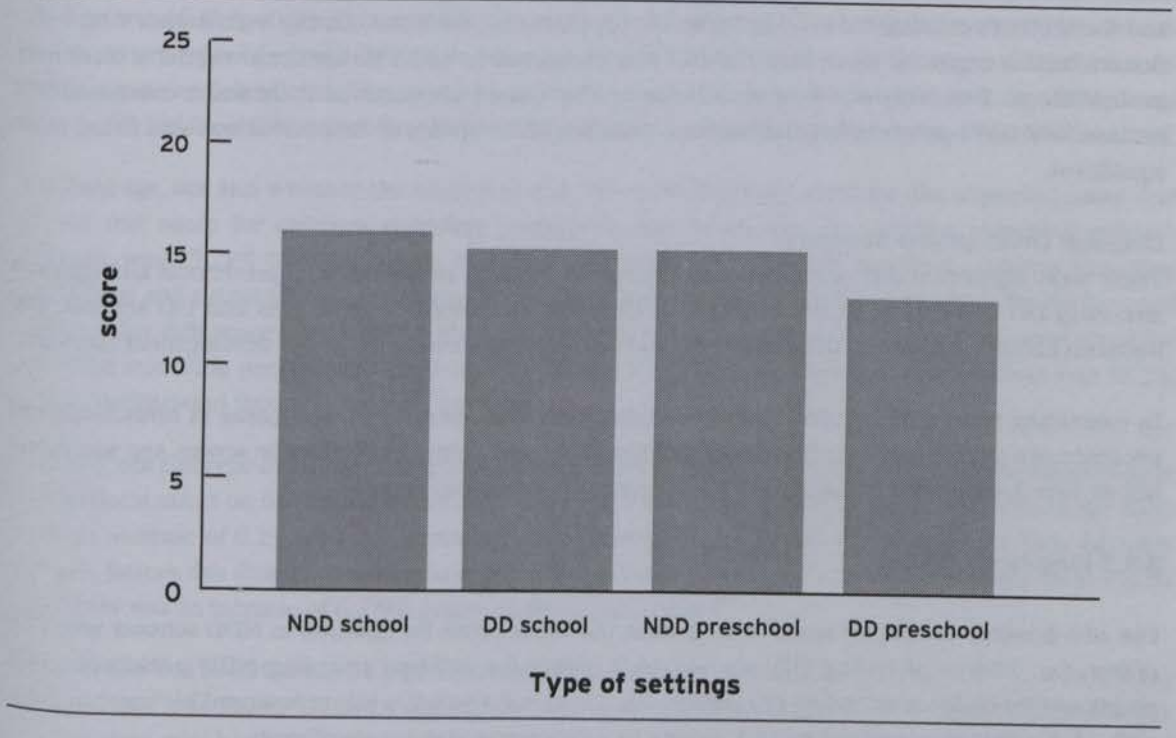
In summary, there were no significant differences between scores of children attending DD schools and children attending NDD schools and between scores of children attending NDD preschools and DD schools on all three elements of the cognitive development measures, spatial relations, quantity and

time. In examining factors of influence, age was found to have a significant effect, both on the overall cognitive developmental measure, and on each individual element. Attendance at a school or preschool had a significant effect on the overall cognitive development score and on the individual elements of quantity and time. Mother's level of education and presence of a dictionary were found to be significant in the spatial relations element only.

8.3.2 Language Development

Out of a possible maximum score of 25 points, the mean score for children attending NDD schools was 15.7 points, for children attending DD schools, 14.9 points; for children attending NDD preschools, 14.9 points and for children attending DD preschools, 12.9 points. Looking at Table 8.1, we find significant differences between scores of children attending NDD preschools and children attending DD preschools; between scores of children attending DD preschools and children attending DD schools, and between scores of children attending DD preschools and NDD schools. As with the cognitive development scores, there were no significant differences between the scores of children in NDD preschools and DD schools and between NDD schools and DD schools. Furthermore, there were no significant differences between the scores of children attending NDD preschools and NDD schools on the language development measure. Girls scored higher than boys, with 15.1 points as compared to 14.1 points, but this difference was not significant.

Figure 8.2 Language mean scores in each setting



Factors of influence

Language
Holding age, sex and whether the child was at preschool or primary school constant, the expected mean score on the language test for children attending DD settings was 13.87, and for children attending NDD settings was 15.48 (p=0.0014); hence, there was a significant difference in scoring between children attending these two types of settings. When the linear model was adjusted to allow for background factors, this difference was no longer significant.

Holding age, sex and whether the child was attending a DD or NDD setting constant, the expected mean score on the language test for children attending primary schools was 15.27, for children attending preschool 14.08 (p=0.0441); hence there was a significant difference in scoring between children attending these two types of setting. When the linear model was adjusted to allow for background factors, this difference was no longer significant.

Holding age and type of setting (preschool or primary school, DD or NDD setting) constant, the expected mean language score for girls was 15.17 and for boys was 14.18 (p=0.0466); hence, there were significant differences in scoring between boys and girls. When the linear model was adjusted to allow for background factors, this significant difference no longer remained.

The differences between children attending DD and NDD settings, primary and preschools, and between boys and girls, is possibly explained by a number of other factors (or linked to these factors) which were included in the setting+background linear model. The presence of a dictionary in the home and the mother's educational level are possible explanations. Children coming from homes with a dictionary had an expected mean score of 14.71 as compared to 12.34 for children without a dictionary in their home. For every one year increase in mother's level of education there was a corresponding increase of 0.2352 points in language scores. Number of occupants in household was also found to be significant.

Language Development: Summary
There were significant differences in scores between children attending NDD preschools and children attending DD preschools; between scores of children attending DD preschools and DD schools; and between children attending DD preschools and NDD schools, on the language development measure.

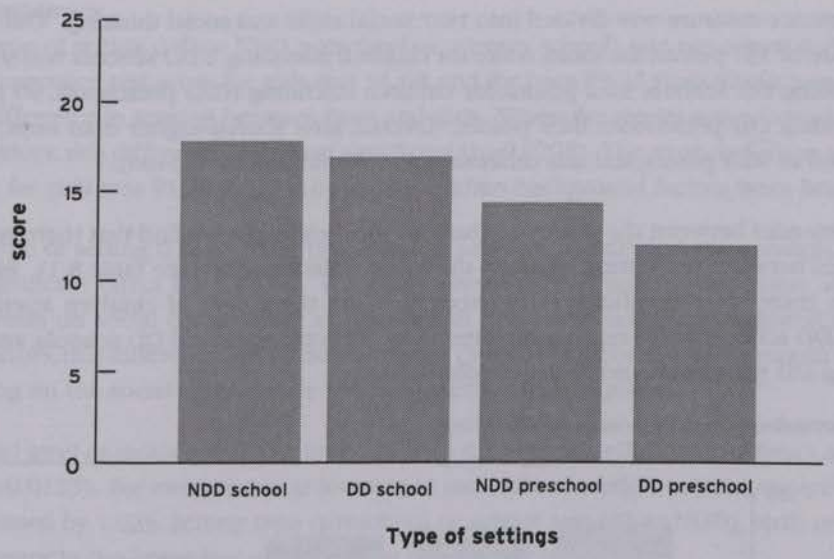
In examining factors of influence, mother's education level, number of occupants in household, and presence of a dictionary in the home, were all found to have a significant effect on scores.Age was found not to have a significant influence on the language development scores

8.3.3 Fine Motor Skills

Out of a possible maximum score of 26 points, the mean score for children in NDD schools was 17.8 points; for children attending DD schools, 16.9 points; for children attending NDD preschools, 14.3 points and for children attending DD preschools, 12 points. Overall, while girls scored higher than boys, with 15.4 points as compared to 15.1, points, this difference was not significant.

There was no significant differences between the scores of children attending DD schools and NDD schools in fine motor skills, but as illustrated in Table 8.1, there were significant differences between all other setting type comparisons.

Figure 8.3 Fine motor mean scores in each setting



Factors of influence

Fine motor skills

Holding age, sex and whether the child was at preschool or primary school constant, the expected mean score on the fine motor test for children attending DD settings was 14.63, and for children attending NDD settings was 16.41 (p=0.0003); hence, there was a significant difference in scoring between children attending these two types of settings. When the linear model was adjusted to allow for background factors this difference remained significant. The expected mean fine motor test score for children attending DD settings was 14.55, and for children attending NDD settings was 15.7, when background factors were held constant.

Holding age, sex and whether the child was at a DD or NDD setting constant, the expected mean fine motor test score for children attending preschools was 14.04, and for children attending primary schools was 17 (P≤ 0.0001); hence, there was a significant difference between children attending preschool and primary school settings. When the linear model was adjusted to allow for background factors, this difference remained significant (p=0.0011). The expected mean fine motor test score for children attending preschool settings was 13.51, and for children attending school settings was 16.74, when background factors were held constant.

Holding, sex and type of setting (DD or NDD, preschool or primary school) constant, age was found to have a significant effect on fine motor scores (p=0.0007). For every one-month increase in the child's age there was an increase of 0.2326 on fine motor scores. When the linear model was adjusted to allow for background factors, this difference remained significant (p=0.0001). For every one-month increase in the child's age there was an increase of 0.2788 points on fine motor scores.

Birth order was found to have a significant effect on scoring (p=0.0421). The presence of a dictionary in the home was found to have a significant effect on scoring (p=0.0313). The expected mean score for children who had a dictionary in their homes was 15.89, for children who did not, 14.36.

Fine-Motor Skills: Summary

There were no significant differences between the scores on fine motor skills between children in DD and NDD schools but significant differences between all other setting comparisons. Significant factors of influence included age, setting type (preschool or school and DD or NDD), birth order and presence of a dictionary in the home. Mother's level of education and sex of child were found not to have a significant effect on fine motor scores.

8.3.4 Social Competence

The social competence measure was divided into two: social skills and social thinking. Out of a possible maximum score of 137 points, the mean score for children attending NDD schools was 93.7 points; for children attending DD schools, 92.2 points; for children attending NDD preschools, 90 points; and for children attending DD preschools, 84.9 points. Overall, girls scored higher than boys, with 92.4 points as compared to 88.2 points, and this difference was significant (p=0.0486).

In examining differences between the scores on the individual elements we find that there were no significant differences between the setting types on the social skills measure (see Table 8.1). In the social thinking measure, there were significant differences between the scores of children attending NDD preschools and NDD schools; between children attending DD preschools and DD schools; and between children attending DD preschools and NDD schools.

Figure 8.4 Social competence mean scores in each setting

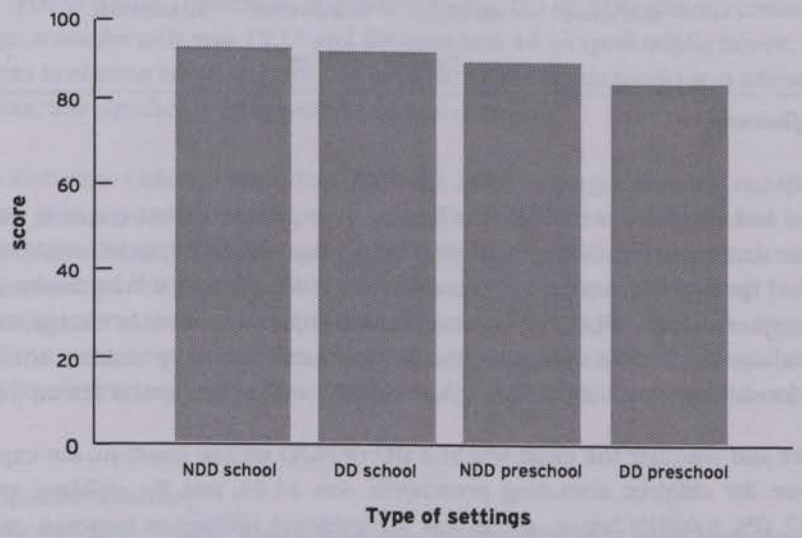
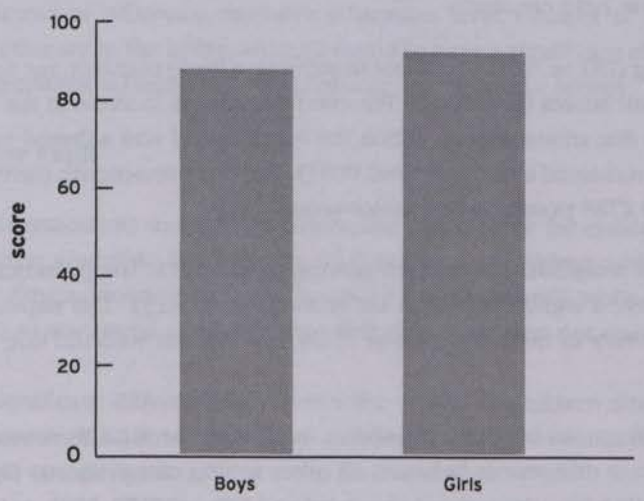


Figure 8.5 Social competence scores for boys and girls



Factors of influence

Social competence.

Holding type of setting (DD or NDD, preschool or primary school), and age constant, the expected mean social competence test score for girls was 93.68, and for boys 89.25 (p=0.0236); hence there was a significant difference in scoring between boys and girls. When the model was adjusted to allow for background factors, this difference remained significant (p=0.0208). The expected mean social competence test score for girls was 91.23, and for boys 86.37, when background factors were held constant.

Holding type of setting (DD or NDD, preschool or primary school), and sex constant, age was found to have a significant effect (p=0.0226). For every one-month increase in age there was an increase of 0.6205 points on social competence scores. When the linear model was adjusted to allow for background factors, this difference remained significant (p=0.0184). For every one month increase in child's age, scoring on the social competence test increased by 0.6925 points.

Educational level of mother was also found to have a significant effect on children's social competence scores (p=0.0125). For every one-year increase in mothers' education, social competence scores of children increased by 1.026. Setting type (preschool or school and DD or NDD), birth order, and presence of a dictionary in the home had no significant effect on scores.

Social Skills.

Holding age, sex and whether the child was at a DD or NDD setting constant, the expected mean social skills test score for children attending preschools was 53.84, and for children attending primary schools was 51.03 (p=0.0244); hence, there was a significant difference between children attending preschool and primary school settings. When the linear model was adjusted to allow for background factors, this difference was no longer significant.

Holding age and type of setting (DD or NDD, preschool or primary school) constant, the expected mean social skills test score for girls was 54.14, and for boys 50.73 (p=0.0013). When the linear model was adjusted for background factors, this difference remained significant (p=0.0021). The expected mean social skills score for girls was 52.39, and 48.89 for boys, when background factors were held constant.

Holding sex and type of setting (DD or NDD, preschool or primary school) constant, age was found to have a significant effect on social skills scores (p=0.0389). For every one-month increase in the child's age, there was an increase of 0.3039 on social skills scores. When the linear model was adjusted for background factors, this difference remained significant (p=0.0264). For every one-month increase in child's age, there was a corresponding increase of 0.3519 points in scoring on the social skills measure.

Factors such as mother's education level, setting type, presence of a dictionary, or birth order, did not have a significant effect on social skills scoring.

Social thinking.

Holding age, sex and whether the child was at a DD or NDD setting constant, the expected mean social thinking test score for children attending preschools was 36.37, and for children attending primary schools was 41.69 (p=0.0010); hence, there was a significant difference between children attending preschool and primary school settings. When the linear model was adjusted to allow for background factors, this difference remained significant (p=0.0361). The expected mean social thinking test score for children attending preschool settings was 35.3, and for children attending school settings was 41.03, when background factors were held constant.

Mother's education level was found to have a significant effect on the child's scoring on social thinking (p=0.0321). For every one-year increase in years of mother's education, there was a corresponding increase of .6010 points on child's scoring. Factors such as age, sex, birth order, and presence of a dictionary in the home, had no significant effect on scoring in the social thinking measure.

Social Competence: Summary

There were no significant differences between the setting types on the social skills measure. On the social thinking measure, there were significant differences between the scores of children attending NDD preschools and NDD schools; between children attending DD preschools and DD schools; and between children attending DD preschools and NDD schools. Significant factors of influence on scoring in social skills were age and sex of child, whilst mother's education and setting type (school or preschool) had a significant effect on scoring in social thinking. Sex of child, age and mother's education also had a significant effect on scoring in the overall measure of social competence.

8.3.5 Preacademic Skills

The preacademic skills measure was divided into three elements: prenumber, prewriting and prereading. Out of a possible maximum score of 112 points overall, the mean score for children attending NDD schools was 50.9 points; for children attending DD schools was 48 points; for children attending NDD preschools, 35.5 points; and for children attending DD preschools, 25.5 points. Overall, girls scored higher than boys, with 42.7 points as compared to 38.7 points, and this difference was significant (p=0.0459). In examining the scoring on the three individual elements of the measure, there were no significant differences between the scoring of children attending DD and NDD schools on all three elements of the assessment. However, as shown in Table 8.1, there were significant differences in scoring between preschool settings (DD and NDD) and school settings on all three elements and between DD preschools and NDD preschools on prenumber and prewriting measures.

Figure 8.6 Preacademic mean scores in each setting

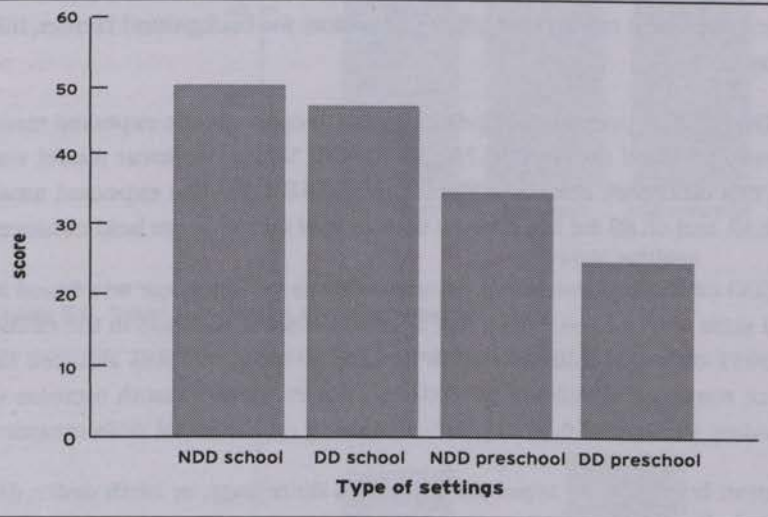
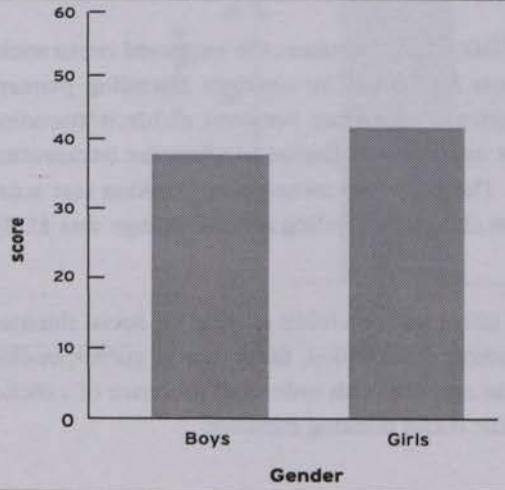


Figure 8.7 Preacademic scores for boys and girls



Factors of influence

Preacademic

Holding age, sex and whether the child was at preschool or primary school constant, the expected mean score on the preacademic test for children attending DD settings was 37.24, and for children attending NDD settings was 43.4 (p=0.0004); hence, there was a significant difference in scoring between children attending these two types of settings. When the linear model was adjusted to allow for background factors, this difference was no longer significant.

Holding age, sex and whether the child was at a DD or NDD setting constant, the expected mean preacademic test score for children attending preschools was 32.76, and for children attending primary schools was 47.87 (p≤ 0.0001); hence, there was a significant difference between children attending preschool and primary school settings. When the linear model was adjusted to allow for background factors, this difference remained significant (p=0.0002). The expected mean preacademic test score for children attending preschool settings was 33.98 and for children attending school settings was 48.10, when background factors were held constant.

Holding age and type of setting (DD or NDD, preschool or primary school) constant, the expected mean preacademic score for girls was 42.5, and for boys was 38.13 (p=0.0118). When the model was adjusted to allow for background factors, this difference remained significant (p=0.0187). The expected mean preacademic score for girls was 43.27, and for boys was 38.82, when background factors were held constant.

Holding, sex and type of setting (DD or NDD, preschool or primary school) constant, age was found to have a significant effect on preacademic scores (p=0.0009). For every one-month increase in the child's age there was an increase of 0.8008 points on preacademic scores. When the model was adjusted to allow for background factors, this difference remained significant (p=.0006). For every one-month increase in the child's age, there was an increase of 0.92 points in preacademic test scores.

Birth order was also found to have a significant effect on scoring (p=0.0461), as was mother's educational level (p=0.0352). For every one-year increase in educational level there was a corresponding increase of .7748 points in child's scoring.

Prenumber

Holding age, sex and whether the child was at preschool or primary school constant, the expected mean score on the prenumber test for children attending DD settings was 12.58, and for children attending NDD settings was 14.45 (p=0.0296); hence, there was a significant difference in scoring between children attending these two types of settings. When the linear model was adjusted to allow for background factors, this difference was no longer significant.

Holding age, sex and whether the child was at a DD or NDD setting constant, the expected mean prenumber test score for children attending preschools was 10.89, and for children attending primary schools was 16.14 (p≤ 0.0001); hence, there was a significant difference between children attending preschool and primary school settings. When the linear model was adjusted to allow for background factors, this difference remained significant (p=0.0187). The expected mean prenumber test score for children attending preschool settings was 11.38, and for children attending school settings was 15.73, when background factors were held constant.

Number of years of mother's education was found to have a significant effect on children's scoring (p=0.0451). For every one-year increase in the number of years of mother's education there was a corresponding increase of .3663 points on prenumber test scores.

Factors such as presence of a dictionary in the home, age and sex, had no significant effect on scoring in the prenumber measure.

Prewriting

Holding age, sex and whether the child was at preschool or primary school constant, the expected mean score on the prewriting test for children attending DD settings was 11.27, and for children attending NDD settings was 14.78 ($p \leq 0.0001$); hence, there was a significant difference in scoring between children attending these two types of settings. When the linear model was adjusted to allow for background factors this difference remained significant ($p=0.0043$). The expected mean prewriting test score for children attending DD settings was 10.96, and for children attending NDD settings was 13.72, when background factors were held constant.

Holding age, sex and whether the child was at a DD or NDD setting constant, the expected mean prewriting test score for children attending preschools was 9.121, and for children attending primary schools was 16.92 ($p \leq 0.0001$); hence, there was a significant difference between children attending preschool and primary school settings. When the linear model was adjusted to allow for background factors, this difference remained significant ($p \leq 0.0001$). The expected mean prewriting test score for children attending preschool settings was 8.87, and for children attending school settings was 15.81, when background factors were held constant.

Holding age and type of setting (DD or NDD, preschool or primary school) constant, the expected mean prewriting score for girls was 14.29, and for boys was 11.76 ($p=0.0018$). When the model was adjusted to allow for background factors, this difference remained significant ($p=0.0012$). The expected mean prewriting score for girls was 13.75, and for boys was 10.93, when background factors were held constant.

Holding, sex and type of setting (DD or NDD, preschool or primary school) constant, age was found to have a significant effect on prewriting scores ($p=0.0002$). For every one-month increase in the child's age, there was an increase of 0.4266 points on prewriting scores. When the model was adjusted to allow for background factors this difference remained significant ($P \leq 0.0001$). For every one-month increase in the child's age, there was an increase of 0.5186 points on prewriting test scores.

Presence of a dictionary was found to have a significant effect on children's scoring ($p=0.0252$). The expected mean score for children coming from a home with a dictionary was 13.67, for children without, 11.00.

Prereading.

Holding age, sex and whether the child was at a DD or NDD setting constant, the expected mean prereading test score for children attending preschools was 12.25, and for children attending primary schools, 14.77 ($p \leq 0.0001$); hence, there was a significant difference between children attending preschool and primary school settings. When the linear model was adjusted to allow for background factors, this difference remained significant ($p \leq 0.0001$). The expected mean prereading test score for children attending preschool settings was 13.09, and for children attending school settings was 16.60, when background factors were held constant.

Number of years of mother's education was found to have a significant effect ($p=0.0483$). For every one-year increase in mother's educational level, there was a corresponding increase of 0.1719 in children's scoring.

Sex, age, presence of a dictionary in the home, and birth order, were found not to have a significant effect on scoring in the prereading measure.

Summary

There were no significant differences between the scoring of children attending DD and NDD schools on all three elements of the preacademic assessment: prenumber, prewriting and prereading. However, there were very significant differences in scoring between preschool settings (DD and NDD) and school settings on all three elements and significant differences between DD preschools and NDD preschools on prenumber and prewriting measures.

In examining factors of influence, sex of child, setting type (school or preschool), age, and birth order were found to have a significant influence on the overall preacademic score. Setting type (school or preschool) had a significant effect on the individual elements of prenumber, prewriting and prereading scores. Also significant was mother's education. Age, sex and presence of a dictionary in the home had a significant effect on prewriting scores but not on prereading or prenumber scores.

8.4 Discussion

One of the most striking findings of the child developmental status measures was the significant difference in scoring between the children in DD preschools and the children in both DD and NDD schools on all measures, with the exception of social skills. There were also significant differences between children in DD preschools and their counterparts in NDD preschools in quantity, time, language development, fine motor skills, prenumber and writing. It is of note that the analysis of family background data identified the children attending DD preschools as being most at risk in terms of low developmental status and school achievement (see Section 4.4). Our findings indicate that children in DD preschools scored lowest on all measures of developmental status, with the exception of social skills. Whilst research cited in the literature review has indicated that children from disadvantaged backgrounds benefit most from *high quality* play-based programmes, it could be argued, that the DD preschools in the sample may not be as effective as possible. This needs further research. Following up the sample will allow us to investigate the developmental status of these children at age 7.

There were no significant differences in scores between the children in NDD preschools and those children in DD schools in cognitive development, language development and social competence. Furthermore, there were no significant differences between children in DD schools and NDD schools on all measures. A general feature of the findings of all five developmental status measures was that girls scored higher than boys. However, the differences in scoring between the sexes was statistically significant only in the social skills and the prewriting measures. It will be interesting to see whether these differences still exist in the Phase 3 follow up when the children will be 7 years old.

The difference in scoring between preschools and schools was greatest in the preacademic measures. The findings of the preacademic measure which was comprised of three sections - prenumber, prewriting and prereading, revealed significant differences both between DD settings and NDD settings, and between preschool and primary school settings. For example, holding age, sex, and whether a child was at a preschool or primary school constant, the expected mean score on the preacademic test for children attending DD settings was 37.24, and for children attending NDD settings was 43.4. Furthermore, there were very significant differences between primary and preschool settings, even when background factors were held constant.

This result is not unexpected, as children attending DD and NDD schools were being taught a prescribed curriculum (see Section 2.5) which covers the elements in the prenumber, prereading and prewriting measures. Thus, during the Junior Infant year in particular, children develop skills such as visual and auditory discrimination, left to right orientation, letter recognition and formation, sorting and

classifying, recognition and writing of numerals. While the preacademic measures provide evidence of the development of skills in this area, the findings do not allow analysis of depth of understanding.

There is no evidence of a common curriculum in DD or NDD preschools, thus it is impossible to assess the extent to which such skills are being developed in a systematic way in preschools. However, observation findings reported on in the previous chapter indicate that more time is spent on preacademic-type activities in schools than in preschools (see Section 7.4.2). Furthermore, when teachers were asked what they considered their responsibility to teach, 36% teachers in NDD and DD schools nominated preacademic skills (more than any other category), while only 3% of preschool teachers nominated preacademic skills as their most important responsibility (see Appendix 4, Table 4.4).

When investigating factors of influence we found, as expected , that the age of the child had a significant effect on scoring in measures of cognitive development, fine motor skills, social competence and prewriting skills. Interestingly, it did not appear to be a significant factor on prereading and prenumber scoring.

Our findings in relation to mother's education as being significant in five of the ten measures would seem to support the finding of previous research which identifies mother's level of education as being the best single socio-economic predictor of student performance (see Section 4.1). It is of note that mothers of children attending DD settings had fewer years in fulltime education (See Section 4.4.2). Mother's marital status was not a significant factor of influence on any measure.

Attendance at primary school settings rather than preschool settings seemed to have a significant effect on cognitive scoring and fine motor scores in addition to preacademic scores (referred to above), even when background factors were taken into account.

The results of the language and social competence measures are interesting in the light of the importance that teachers in all settings attributed to these areas of the early childhood curriculum. It is to be recalled that teachers in NDD schools and NDD and DD preschools chose social skills with peers as the most important skill for children to learn between the ages of three and five. Teachers in DD school settings chose language skills as the most important skill (see Section 6.3.1). Whilst the children in NDD schools scored highest on the language measures, the variability in scoring between DD and NDD schools and NDD preschools was only 0.8 of a point (mean scores of the children in DD schools and NDD preschools were identical for this measure). Presence of a dictionary in the home was found to be a significant factor of influence on the language measure.

The value of these measures and the true significance of the differences reported will become evident at Phase 3 of the IEA Preprimary Project.

Summary

- There was a significant difference in scoring between the children in DD preschools and the children in both DD and NDD schools on all measures, with the exception of social skills, with children in DD preschools scoring lower.
- There were no significant differences in scores between the children in NDD preschools and children in DD schools in cognitive development, language development and social competence.
- Differences in scoring between children in DD schools and NDD schools were not significant on any measure.
- Girls scored higher than boys on all five developmental status measures. The differences in scoring between the sexes was statistically significant in the social skills and the prewriting measures, and in the overall social competence and preacademic skills measures.
- The difference in scoring between preschools and schools was greatest in the preacademic measures.
- Age of the child had a significant effect on scoring in measures of cognitive development, fine motor skills, social skills and prewriting skills.
- Mother's education level was a significant factor of influence in five of the ten individual measures: mother's marital status was not a significant factor of influence on any measure.
- Attendance at primary school settings rather than preschool settings had a significant effect on cognitive scoring and fine motor scores in addition to preacademic scores.
- Children in NDD schools scored highest on the language measures. However, the variability in scoring between DD and NDD schools and NDD preschools was only 0.8 of a point (mean scores of the children in DD schools and NDD preschools were identical for this measure). Presence of a dictionary in the home was found to be a significant factor of influence on the language measure.
- The value of these measures and the true significance of the differences reported will become evident at Phase 3 of the IEA Preprimary Project.

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1 The cognitive developmental status test items were adapted from *Manual for Assessment in Nursery Education, Boehm Test of Basic Concepts, Bracken Basic Concept Scale* and developmental instruments submitted to the IEA Preprimary Project by the participating NRC in Hong Kong, 1989. Language development items were adapted from the *Test of Early Language Development (TELD).* Fine motor test items were adapted from *Manual or Assessment in Nursery Education, Developmental Indicators for the Assessment of Learning-Revised.* Social competence items were adapted from *Manual for Assessment in Nursery Education,* Developmental Instruments submitted to the IEA Preprimary Project by Hong Kong, 1989, *California Preschool Social Competency Scale,* cut-out pictures of model people developed by individual NRCs and mounted on card. Preacademic items were adapted from the following: developmental instruments submitted to the IEA Preprimary Project by Hong Kong, 1989, *Cognitive Skills Assessment Battery, Young Children and Mathematics, Bracken Basic Concept Scale, Early Screening Inventory, The Learning Accomplishment Profile, Developmental Indicators for the Assessment of Learning-Revised, ManualforAssessment in Nursery Education, Child Observation Instrument-Revised, Cognitive Skills Assessment Battery, Boehm Test of Basic Concepts, Carolina Developmental Profile.*

2 Number of children in each of the four setting types who completed each of the tests were not equal.For a complete account of the number of children per setting who completed tests, see Appendix 9, tables 9.1, 9.2, 9.3 and 9.4.Also, there was some variation within settings in terms of numbers of children who completed individual tests. See Appendix 9.

3 This statistical analysis was carried out in High/Scope Educational Research Foundation.Significance levels were not available when the Report was going to print.

4 Significant differences between the settings were not available for overall scores in cognitive development, social competence, and preacademic scores when the Report was going to print.

5 Expected mean scores are reported when other factors in the model are held constant. In the setting model, for instance, the expected scores for boys and girls are the mean scores that the boys and girls would have attained if, 1. the mean age within each sex was the same as the overall age, 2. if the two groups attended the same type of setting (i.e. preschool/school and DD/NDD status were held constant).

CHAPTER 9 | CONCLUSION AND IMPLICATIONS

The years 1994 to 1997 may well be seen by educational historians as important ones in the development of early childhood services in Ireland. The following is a sample of some of the more important features of this period.

- **In 1994 the Department of Education launched the Early Start initiative for 3 to 4-year-olds living in designated disadvantaged areas. This intervention programme was developed as a means of combating risk of later school failure by giving the children attending a head start in the educational system. This pilot initiative, for a variety of reasons, sparked off a wide-ranging debate about: 1) how we provide for our young children; 2) what training is necessary for adults working with this age group and 3) who should have responsibility for the development of the preschool sector. The Department established the Early Start Monitoring Group, which is expected to report on the initiative in 1997.**

- **In 1994 the Department of Health convened a Working Group of the varied interests in early years provision to develop Preschool Regulations for this previously unregulated sector. With the final implementation of the 1991 Child Care Act the regulations came into force in January 1997.**

- **Under the Partnership 2000 agreement of 1996, the Department of Equality and Law Reform was charged with the responsibility of bringing together the varied strands of the childcare and early education sector so that a National Framework for the sector could be agreed. The Department called together a widely representative Expert Working Group which held its first meeting in Dublin in July 1997.**

- **EU funding, through various programmes, continued to support a number of innovative local and national projects in the area of childcare. These projects have strengthened the voice of those providing and requiring childcare and continue to ensure that the wider issue of early childhood service development, and the needs of children, are not forgotten.**

9.1 IEA Preprimary Project

It was during this period of change and development in early childhood care and education in Ireland that the IEA Preprimary Project began. This was a carefully-designed study which was ambitious in scale, costly to carry out and time-consuming to evaluate. Nonetheless, the data collected represents a rich source of information on Irish 4-year-olds which has never been available before.

The quality of a project such as this requires the confidence and support of a wide range of people for it to be successful. The project funders supported the study in a very tangible way and without their assistance the project could never have begun. The research team invited a number of people to act as an advisory group to the project. This group was a constant source of advice, information, constructive criticism and belief in the project.

The design of the project for Ireland owes a great deal to Dr. Leslie Kish, an internationally recognised authority in sampling at the Institute of Social Research, University of Michigan. His advice on sample size and distribution yielded a sample that was representative of children attending the identified settings across Ireland. Care in selecting and locating the sample was critical to the success of the study. The research team found great goodwill for the project among teachers, parents, managers and the government Departments and organisations associated with the settings we selected and visited. This was reflected in our success at collecting data on 396 of the targeted sample of 400 children in 109 settings.

In addition to a carefully-designed and sampled study, it was also essential that our data be of high quality. The data collectors who worked on the project were committed and reliable. They collected high quality data with high inter-rater reliability, particularly important in a study utilising such a comprehensive observational system of data collection.

While no research in the socio-educational area can be entirely objective, this study has been carefully designed and analysed to present the data as clearly and objectively as possible. The value of the information in this Report is more in its being available for study, than in any unexpected findings uncovered. In fact many of the findings simply confirm opinions held about early educational provision in Ireland.

9.2 Project Aims

There were three main aims identified for this project. This Report is a contribution to fulfilling these aims.

- To describe the quality of early years experiences of a sample of Irish 4-year-olds.

A description and analysis of the early years experience of the sample has been presented in this Report and the quality of these experiences has been addressed as much by the questions posed as by the detail given. Quality, as has already been discussed, is a relative term and a difficult concept to define. This Report has presented findings which detail the context of children's experiences, the expectations of parents and teachers, the pedagogy and curriculum of the early years, and child developmental status measures. The findings give details about the 'quality markers' described by Melhuish (1993) and initial details of the process of quality itself through the observation findings. Given the simultaneous observation of children and teachers in the settings, it will be possible to examine what the children are doing when asked by the teacher to be involved in specific activities, and this will allow a more thorough discussion, and fuel future debate, about the quality and effectiveness of the experiences reported.

- To examine designated disadvantaged and non-designated disadvantaged settings.

Analysis of the data was designed to allow for the comparative description of designated (DD) and non-designated disadvantaged (NDD) settings. Although there were some differences in experiences for children attending DD and NDD settings, it is of interest that the primary differences reported were between preschool and school settings. The value of the longitudinal nature of this project is that it will allow us revisit this question when analysing the data gathered when these children are aged seven. It is here that we would expect to find some differences between the designated and the non-designated school settings and their impact on the children attending.

- To build up a knowledge base in the field of early years services.

The database that this study has generated - not to mention the detail in this current Report - has already contributed to our information about early educational experiences of 4-year-olds in Ireland. The research team has secured funding to 1) allow for the continuation of the project through to Phase 3 and 2) allow for post-graduate analysis of the project database so that the wealth of information available will not be lost due to lack of use and passage of time. Indeed, it is the intention of the research team that others should use this Report, and other reports from the project, to initiate future research projects on themes that emerge from our research. We would also argue that the information now available is sufficient to contribute to a timely debate about policy, practice and provision of early years services in Ireland.

9.3 The Families in the Study

While there was only a slight difference in the number of occupants per household between children attending DD and NDD setting (5.1 v 4.8), 17% of the mothers of children in DD settings indicated that they were never married, as compared to 4% in NDD settings. In general, both mothers and fathers of children attending DD settings had two years' fewer full-time education than parents of children attending NDD settings. Although the range of income across settings was similar, the mean level of income was significantly lower in families of children attending DD settings.

Despite the widespread concern over the relatively crude nature of the criteria used to identify areas as designated disadvantaged, our results suggest that it is a reasonably robust measure. One must be cautious in the interpretations of the results, however, and bear in mind that socio-economic background need not necessarily determine how well a child will do at school - it is what parents do in the home rather than their status which seems to be important (Kellaghan, Sloane, Alvarez & Bloom, 1993).

In comparing the Child Development Status (CDS) measures across settings, two linear models were developed to allow us measure the significance of impact of certain background variables on the CDS (see section 8.3 for details). These background factors included 1) the hours spent by child in setting each week; 2) the number of occupants in the household; 3) birth order; 4) the presence of a dictionary; 5) the number of years of maternal education, and 6) the marital status of mother. In certain cases, where significant differences were found in the Child Development Status measures (see Chapter 8 for details), the significance remained when the linear model was adjusted to allow us measure the impact of background factors. In such situations certain background factors were shown to have a significant effect on the differential scores noted. Table 8.2 shows, not unexpectedly, that maternal level of education was an important factor, whereas hours spent in the setting, marital status and birth order appear to have little impact.

9.4 The Settings

Research on the quality of early years provision has identified structural factors such as the quality of human resources, organisation of the physical environment, group size and ratios, as being significant. The analysis of the setting data reported in Chapter 5 indicates that there are a number of significant differences between preschools and schools. These include:

- differences in the training of staff with teachers in all the school settings following a similar course of training. In the preschool sector this was not the case. In fact only 35% of teachers in the NDD preschools and 61% in DD preschools had attended a formal training programme. There is no common training programme for preschool teachers as there is for teachers in the primary school sector. However, with increased understanding about the need for appropriate training in this field, this is an issue which is getting more attention in 1997 than it did in 1994 and 1995.

- differences in adult-child ratio between the school and preschool settings. Not only are the group sizes larger in the school settings than in the preschool settings but the ratio of adults to children is significantly different at 1:25 or 1: 26 in the school settings and 1:6 or 1:8 in the preschool settings. There is virtually no difference in ratio between DD and NDD school or between DD and NDD preschools. The 1996 Department of Education Breaking the Cycle initiative may have altered this situation for certain settings, and the ratio of adult to child in the Early Start projects for 3 to 4-year-olds is 1:8. Not only is the ratio in the preschool settings more appropriate to the needs of this age group but the presence of a second adult (not a feature of the school settings) has a positive impact on the type of interactions that can occur between adults and children.

- difference in the type and availability of equipment was also noted. In particular, there was a greater choice of materials available in the preschool settings than the school settings, with the best selection in the NDD preschools. Schools did have more preacademic materials, such as workbooks and letter games, and also more audio-visual equipment. This latter point may reflect the fact that all schools receive capitation and equipment grants from the Department of Education, which allows them to purchase this relatively expensive equipment. The prevalence of workbooks in classrooms for young children has been criticised by Goodlad, cited in Berk and Winsler (1995). He cautions that a reliance on such adult-structured materials denies the young child's spontaneous development and is in opposition to our current conceptions of developmentally appropriate practice and curriculum. The differences noted between the settings suggests a very different philosophy about what experiences and materials should be available to children of this age.

9.5 Parent and Teacher Expectations

The impact of expectations about child development on the quality of education was recognised by the IEA Project Development Team and for this reason it constituted an important element of the study. They argued that high quality education for children occurs where there is clear agreement among teachers about expectations for children (i.e. about the important areas of development), when parents have a clear expectation of what their children should learn, and when these two points of view agree.

The findings in this section of the study are a cause of some concern. Seventy six percent of all teachers nominated *social skills with peers* as one of the three most important skills that children should learn between the ages of 3 and 5. However, there were differences between teachers in the different settings in terms of what they considered was their most important responsibility to teach. More teachers in the school settings nominated teaching *preacademic skills* as their most important responsibility, whereas more preschool teachers nominated *social skills with peers* as theirs. Thus, while we have an overall picture of a body of teachers disagreeing, with a strong emphasis on academics, the teaching of preacademic skills is a priority in the curriculum for the junior infant classes. Furthermore, observations of teachers in school settings indicate that they plan preacademic activities and teach preacademics more than any other observed categories.

Bennett and Kell (1989) noted that teachers in their study felt under pressure from parents to teach preacademic skills; we did not ask teachers whether they felt pressurised to teach preacademics but parents in our study did place great emphasis on the preacademic, with 27% of parents of children in DD settings nominating *preacademic skills* as the most important skill for children to learn at this age. There was some evidence of ideological harmony around expectations between parent and teachers in the NDD preschool settings.

Although there appears to be consensus between all teachers as to what are the most important skills for children to learn at age 4, the lack of consensus between teachers in schools and teachers in preschools as to their perceived responsibilities is problematic. It suggests that teachers in school settings emphasise classroom activities that do not always coincide with what they consider personally to be important for children, and this is found to be the case when we analyse the observational data. This lack of agreement between theory and practice is noteworthy and points to a need to clarify how training, curriculum development and practice can be brought into some form of alignment to the benefit of the children.

The situation is not so conflicting for preschool teachers. Observational data suggests that their practice reflects their beliefs more consistently, with most of the time planned for children around mixed activities. We will be completing more detailed, indepth analysis of the observational data in the light of the expectation data in the future.

9.6 Observation Findings

In addition to observing the adults' management of time, this element of the study recorded child activities and adult behaviour. As under other headings, the differences were more pronounced between the school settings and the preschool settings than between the DD and the NDD settings. Within the management of time, the low level of free activity planned in school settings is of interest, especially when coupled with the fact that the social origin of most child activities was recorded as *child- initiated.* Cross analysis of the observational data, which is currently under way, will allow us look at what children are actually doing when the adult plans a particular activity. This indepth analysis will shed more light on the current pedagogy of early years settings.

Children in school settings are more likely to be in whole group structures than children in preschool settings, with teachers proposing whole group activities 88% of the time in DD schools and 85% in NDD schools. This compares to 63% in NDD preschools and 77% in DD preschools. Although there are times when whole group instruction is appropriate, the high level observed in the settings needs to be further analysed. The implications of these findings are different for the different settings as the whole group size in a preschool is generally smaller than in a school and, in addition, there is more likely to be a second adult present in a preschool than in a school setting.

Given the current debate about the social nature of learning and the importance of discourse, dialogue and peer interactions to learning, it is interesting to note the very low level of recorded interactions between the children observed and either the adults or the children in the settings. Furthermore, there were relatively high levels of observations coded under *no active engagement*, with 13% in DD schools and 12% in NDD schools. The level was slightly less for preschools, with 9% of observations in this category in NDD preschools and 8% in DD preschools. Caution is necessary in interpreting such observations out of context; "none can tell whether a child gets more from the blackboard than from looking out the window" (Korczak cited in Frangos, 1996). When children as a group might seem to be engaged actively in teacher-directed activities, if they are observed as individuals, they may show higher rates of no *active engagement, not interacting* and low levels of verbalisation. The issue of the social nature of children's experiences needs further analysis for interpretation.

As in so many of the findings of this study, there were greater differences observed in adult behaviour between the school and preschool settings than within the settings. Perhaps not surprisingly, teachers in school settings were observed most often in teaching behaviour than under any other category. In preschools, the teachers were observed more often in participation/shared and routine activities. Overall preschool teachers were less directive and more participatory than their school-based colleagues. Teachers in DD school settings were the most directive of all. Research indicates that traditional classrooms in which adults grant children little leeway for self-direction are successful in attaining the short-term goal of slightly higher achievement test scores. Yet, in terms of fostering autonomous learning, interest, involvement and creative thinking, they are disadvantaged (Berk & Winsler, 1995; Schweinhart & Weikart, 1997).

Expressive activities were recorded in all settings, with 15% in DD schools; 11% in NDD schools; 21% in NDD preschools and 18% in DD preschools. Closer inspection of the raw data shows that in schools the *expressive activities* were more likely to be in the *arts and crafts,* and in preschools they were more likely to be in *dramatic play*. This type of detailed analysis of the observational data has only just begun but it is showing quite considerable differences between school and preschools and remarkable similarities within schools and preschools. This is, perhaps not such a great surprise in the schools, which follow a prescribed curriculum.

The results of this study to date are in line with findings reported by Sylva and David (1990). We appear to be offering two distinct types of early years provision to our 4-year-olds in Ireland - on the one hand is the reception, or junior infant class, with a prescribed curriculum, large group sizes, limited equipment, apart from preacademic and audio-visual materials, and staffed by well trained teachers who plan and direct children's activities with a strong emphasis on preacademic activities. On the other hand are, preschool settings, with no defined curriculum or curriculum guidelines, varied group sizes with adult:child ratios of from 1:6 to 1:8, varied equipment, and staffed by adults with varied or no training, who plan an environment which emphasises mixed activities over any other category. How one interprets these findings will depend on what one believes about how children learn but we cannot ignore the differences that exist in any debate about the early services we provide.

9.7 Child Development Status

The data gathered on the Child Development Status (CDS) for the sample shows differences between the groups, with the most striking difference being between the CDS scores of children attending the DD preschool setting and all other children. There are a number of possible explanations for this. It could be related to the age of the children at the time of data collection. We do know that the mean age of the preschool sample was below that for the school sample. It could also reflect the nature of the population attending the DD preschools. Many of the DD preschools were located in areas of disadvantage. Some settings operated a selection process for entry, as spaces were limited, and so it is possible that the children attending were those considered to be most at risk. Further analysis of the raw data will be necessary to interpret this finding.

There are also CDS differences noted between children in NDD preschools, and those in the two school settings. This may be explained by the fact that the children in the school setting are following a prescribed curriculum, which addresses, explicitly, a number of the skills tested as part of the CDS battery. It is also interesting to note that there were no significant differences at all between the children attending the DD schools and those in the NDD schools. Whether this holds over time, will be evident following completion of Phase 3 of the project.

There are a number of ways in which we have yet to analyse the data. For instance, the CDS measures show that girls score higher than boys on all measures. It will be interesting to see if this difference still exists at age seven. An urban/rural analysis would also be valuable. The design of the project could not take into account a representative sample for urban/rural settings. Nonetheless, there are rural and urban settings in the sample, and an analysis of the data under this heading might yield interesting preliminary information which could inform future research.

9.8 Implications

This report represents the first published analysis of the Irish Phase 2 element of the IEA Preprimary Project. The findings raise a number of issues for consideration in relation to practice, provision, policy and research, and it is intended that this Report would generate discussion, debate and action, that will lead to improvements in the quality of our early years services.

In the main, the findings indicate that there are significant differences in the experiences of Irish 4-year-olds that are related to whether they are attending a school or preschool, rather than to whether they are attending a DD setting or a NDD setting. There are positive aspects of provision across all the settings that should be encouraged. However, some areas of concern were also uncovered and they will be presented below.

- The difference in ratios between the preschool and school settings was striking.
- The prevalence of whole group instruction is noted, particularly in school settings, where group sizes are large.
- The limited variety of materials in the school settings is noted.
- More resources are needed to allow preschool services purchase audio-visual equipment.
- The limited opportunities for Free Activities across all settings needs further analysis.
- The emphasis on Preacademic Activities, in school settings particularly, needs to be addressed.
- Further analysis of the raw data is required to yield more specific detail about curriculum and pedagogy in early years provision
- Action is needed to overcome the mismatch between parent and teacher expectations about child development and the role of early years services.
- Teacher training for this stage of education needs to be reviewed, particularly in the light of the disparity evident between teacher expectations and practice in school settings.
- Given the high level of directive teaching observed in school settings, a review of the content of teacher training courses should be considered.
- Supportive initiatives are necessary to improve the training opportunities for those with inappropriate, little or no training. Such initiatives should encourage greater access and flexibility across the care and education divide.
- Training should be provided to ensure that the newly-appointed Department of Health Preschool Inspectors are clear as to what constitutes quality in early years services.
- A national debate about quality early education and the needs of young children is necessary. Such a debate would include parents, managers, practitioners, educationalists, researchers and policy- makers.

Finally, in developing and improving early childhood care and education services in Ireland those concerned must:

1) recognise the varied provision that exists and develop mechanisms to bring the strands together rather than maintaining the artificial, structural divide between care and education that currently exists

2) take account of the need to upgrade early years teachers not only in terms of skills and competencies but also in terms of morale and status

3) understand the way in which young children learn, valuing the importance of play, activity and social interaction to their learning

4) always keep the child central to deliberations.

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APPENDIX 1 | SELECTION OF SETTINGS

Organisations Contacted

Initial contact with the sample was made through the Department of Education and organisations representing the preschool sector. The Department of Education provided a complete listing of schools. There were problems with this list, however, as it did not distinguish between Irish and English-speaking schools and special schools and schools with and without infant classes. There was also a designated disadvantaged schools list. These schools were removed from the other list so that there would be no duplication.

Regarding preschools, the directory of the Association of Montessori Ireland (AMI) was used. St. Nicholas Montessori Association, the Irish Preschools Playgroups Association (IPPA) and An Comhchoiste Réamhscolaíochta Teo., with the agreement of their members also made their list of members available to us on a confidential basis. There was also an incomplete list of state-aided services which included in the main, specific health board services. The IPPA provided a list of playgroups which received help from the state - these were designated disadvantaged.

APPENDIX 2 | SAMPLING PROCEDURE

Settings

The sample was developed in the following manner. Listings of children attending preschools and primary schools were obtained. This listing was further divided in terms of designated disadvantaged and non-designated disadvantaged schools and preschools. Approximately equal numbers of settings were to be chosen from each cell. From each setting within each cell, researchers chose a maximum of four children from those in the target age-range.

Settings

1. Non-Designated Disadvantaged Schools
   Twenty-six schools were originally to be selected. Data was received from the Department of Education and contained details of all the National Schools in the State. This data was ordered by enrolment figures with the highest enrolment school first. This facilitated use of the PPS (Probability Proportional to Size) procedure for selecting the sample of 26.

   The total number of schools was 3,223. The interval necessary to select 26 from the list was: 20,107 (based on enrolment figures). The random start figure, selected using Excel RAND, was 3,092.

   As the list given included all National Schools, a small number of the initial selection were, in fact, disadvantaged, senior or special schools. Where this occurred the next school was selected. In total, 28 non-designated disadvantaged schools participated in the study with 101 children.

2. Designated Disadvantaged National Schools
   Twenty-six schools were to be selected originally. A list of all designated disadvantaged schools was received from the Department of Education. As with the general sample, it was ordered according to enrolment figures. Using PPS, a sample of 26 schools were selected.

   The total number of disadvantaged schools was 258. The interval necessary to select 26 schools was 2,963 (based on enrolment figures). The random start figure, selected using Excel RAND was 2,716. In total, 27 designated disadvantaged schools participated in the study, with 102 children.

3 Non-designated Disadvantaged Preschools
   The data from which the original 24 preschools were selected was made up from material received from the AMI Montessori directory, An Comhchoiste Réamhscolaíochta Teo., the IPPA and St. Nicholas Montessori Society. It was ordered to reflect the most common form of preschool setting with the most common placed first.

   The total entry into the preschool file was 1,959. A number of entries in the material given were not appropriate, e.g. individual members with no preschool service. A second file, containing only relevant data, was created. It contained 1,748 entries from the original thus

484 - 1,532	Playgroups
6 - 306	Community Playgroups
1,740 -1,920	Naíonraí
309 -444	Montessori (IPPA-registered)
1,921 -1,960	AMI Montessori
1,703 - 1,739	St. Nicholas

(Omitted were: 307 - 308 (creches); 445 - 483 (parent and toddler groups); 1533 -1702 (individual members). This yielded a total of 211 to be omitted).

The interval necessary for selecting the original sample number of 24 was 72.9, truncated to 72. (Truncated to maintain the selection within the 1,748). The random starting point, using Excel RAND, was 45.

In this way the 45th preschool on the list was chosen as the first preschool to be contacted, next the 117th preschool (45+72) and so on. If preschools refused to participate or did not have any 4-year-olds then the next preschool on the list was contacted, for example, the 118th preschool. Twenty-five non-designated disadvantaged preschools participated in the study, with 90 children in total.

4. Designated Disadvantaged Preschools

From the beginning of the project it was recognised that this 'cell' would be difficult to fill as the material from which to draw the sample was scattered and incomplete. As with the other cell data, it was agreed that the data should be as inclusive as possible. The final data file in this group was made up from Department of Health details on those preschools, throughout the state, that received grant aid from 1992 to 1993 and Department of Education details of those preschool services receiving grant aid or support.

The complete file contained 357 entries. One problem identified was that Health Board funded preschools could also be included within Department of Education information but the addresses were not always the same. In so far as was possible duplication was avoided.
The data in this file was ordered, with the Health Board material first, as given by Health Board locations, followed by Department of Education material. Not enough data on enrolment was given to allow this factor to be used as an ordering process.

To obtain the original sample of 24 disadvantaged preschools, an interval of 14.8 was truncated to 14. (Truncated to maintain the selection within the 357).The random start, using Excel RAND, was 11.

Hence, the 11th preschool on the list was contacted, next the 25th (11+14) and so on. If preschools refused to participate or did not have any 4-year-olds in attendance the next preschool on the list was contacted, for example the 26th. Twenty-nine designated disadvantaged preschools participated in the study, with 103 children.

APPENDIX 3 | COMPUTER ANALYSIS

All the data collected (provider director and teacher, parent and teacher expectations, family background, observations and assessments) for each target child at each setting was coded by data collectors according to IEA Preprimary Project guidelines contained in coding manuals.

Codes were checked by the research team and then entered on separate diskettes formatted for a DOS system which had been sent to Ireland by personnel at the IEA headquarters in Michigan. These diskettes contained SPSS PC+ dictionary files for each category of information - provider, expectations, family background, observations, assessments. Some files were in portable file format so it was necessary to convert to a systems file format using Data Entry II.

For example, when all expectations data had been received by the research team in Ireland, it was checked and entered on a specially formatted diskette and sent on to the US for inclusion with the total data set from all participating countries. Copies were retained for data analysis in Ireland.
While data had been entered on a DOS system (using SPSS PC+ version 5.0.1) it was decided to analyse this data using a statistical package called Data Desk (version 5.0.1) which runs on any Macintosh computer. Hence, it was necessary to convert disks from DOS to Macintosh format. This was achieved in the following way:

- systems files (containing provider, expectations, family background, observations and assessments) on the PC were saved as portable files onto a floppy disk;
- these portable files from the floppy were copied to a folder on the Macintosh;
- these files were converted (on the Macintosh) so that SPSS for the Macintosh could read them as portable files;
- they were then saved as tab delimited files;
- these were ready for analysis using Data Desk.

APPENDIX 4 | FAMILY BACKGROUND INFORMATION

The following tables are available in Early Childhood Research Centre, DIT, on request.

Table 4.1 Employment Statistics - mothers
Table 4.2 Occupation if working by setting - mothers
Table 4.3 Employment Statistics - fathers
Table 4.4 Occupation if working by setting - fathers

APPENDIX 5 | MATERIALS AND EQUIPMENT

List of materials and equipment

- Slides
- Climbers
- Swing-set
- Scooters
- Pedal cars
- Bicycles
- Tricycles
- Basketballs
- Basketball hoop
- Tree house
- Jungle gym
- Ladders
- Climbing ropes
- Balance beams
- Bouncing boards
- Wagons
- Roller-skates
- Jump ropes
- Balls
- Large construction toys
- Bean bags
- Bats/sticks/racquets
- Hula hoops
- Pools/sprinklers
- Rockers
- Pull toys
- Parachutes
- Jumpers
- Gym mats
- Large trucks
- Sleds
- Water table/toys
- Sandbox table/sand toys
- Playdough
- Puzzles/puzzle table
- Small construction toys
- Small toys with wheels
- Child-size carpentry tools
- Sewing/lacing cards
- Weaving materials
- Beads
- Peg boards
- Doll houses
- Doll house equipment
- Dolls/ethnic dolls
- Toy villages
- Toy farms
- Toy petrol stations
- Toy airport
- Dress-up clothes
- Play props
- Play people
- Toy workbench
- Puppets
- Playhouse
- Child-size play furniture
- Pencils/pens
- Chalk
- Crayons
- Water-colour paints
- Finger paints
- Tempera paints
- Other paints
- Paint brushes
- Paper/different kinds
- Scissors
- Clay
- Glue/paste
- Starch
- Chalkboards
- Easels
- Other materials
- Real music instruments
- Toy music instruments
- Songs/song books
- Tapes/records
- Rhythm instruments
- Rocks
- Feathers
- Bones
- Furs
- Plants
- Shells
- Leather
- Animals to hold
- Animals to observe
- Prisms
- Magnifying glasses
- Aquarium
- Books
- Workbooks
- Magazines
- Newspapers
- Shape sorters/toys
- Colour games/toys
- Number games/toys
- Stacking/sorting toys
- Films/filmstrips
- Videos
- Letter games/toys
- Comic books
- Card games
- Board games
- Television
- Radio
- Projector
- Projection screen
- Video cassette recorder
- Video cassette player
- Record player
- Tape recorder
- Computers/micro computers
- Pots/pans
- Utensils
- Dishes
- Baking supplies
- Cots, mats, beds

APPENDIX 6 | TEACHER AND PARENT EXPECTATIONS

Key:

1 Preacademic skills
2 Motor/physical skills
3 Self-expression skills
4 Language skills
5 Social skills with peers
6 Social skills with adults
7 Self-sufficiency skills
8 Self-assessment skills
9 Other skill
99 Missing response

Table 6.1 Teachers in each setting who chose each of the eight skills categories as most important for children to learn

	DD Preschool	DD School	NDD Preschool	NDD school	Total
1	0 0%	4 14.3%	0 0%	3 10%	7 6.19%
2	0 0%	1 3.57%	3 12%	2 6.67%	6 5.31%
3	2 6.67%	1 3.57%	2 8%	3 10%	8 7.08%
4	6 20%	9 32.1%	6 24%	4 13.3%	25 22.1%
5	8 26.7%	6 21.4%	7 28%	7 23.3%	28 24.8%
6	1 3.33%	0 0%	0 0%	1 3.33%	2 1.77%
7	3 10%	3 10.7%	4 16%	3 10%	13 11.5%
8	7 23.3%	2 7.14%	3 12%	3 10%	15 13.3%
99	3 10%	2 7.14%	0 0%	4 13.3%	9 7.96%
total	30 100%	28 100%	25 100%	30 100%	113 100%

Table 6.2 Teachers in each setting who chose each of the eight skills categories as least important for children to learn

	DD Preschool	DD School	NDD Preschool	NDD school	Total
1	6 20%	2 7.14%	5 20%	3 10%	16 14.2%
2	7 23.3%	4 14.3%	5 20%	4 13.3%	20 17.7%
3	1 3.33%	2 7.14%	3 12.0%	1 3.33%	7 6.19%
4	1 3.33%	2 7.14%	1 4.00%	0 0%	4 3.54%
5	0	0	0	0	0
6	4 13.3%	3 10.7%	4 16.0%	6 20%	17 15.0%
7	1 3.33%	2 7.14%	3 12.0%	5 16.7%	11 9.73%
8	2 6.67%	10 35.7%	4 16.0%	6 20%	22 19.5%
9	1 3.33%	0 0%	0 0%	0 0%	1 0.885%
99	7 23.3%	3 10.7%	0 0%	5 16.7%	15 13.3%
total	30 100%	28 100%	25 100%	30 100%	113 100%

Table 6.3 Number of teachers in each setting who chose each of the eight skills categories they believed were most important to parents

	DD Preschool	DD School	NDD Preschool	NDD school	Total
1	14 46.7%	9 32.1%	3 12.0%	9 30.0%	35 31.0%
2	2 6.67%	0 0%	1 4.00%	1 3.33%	4 3.54%
3	1 3.33%	1 3.57%	2 8.00%	3 10%	7 6.19%
4	4 13.3%	2 7.14%	2 8.00%	3 10%	11 9.73%
5	2 6.67%	1 3.57%	6 24.0%	4 13.3%	13 11.5%
6	0 0%	4 14.3%	2 8.00%	4 13.3%	10 8.85%
7	3 10%	7 25%	6 24.0%	1 3.33%	17 15.0%
8	1 3.33%	1 3.57%	1 4.00%	1 3.33%	4 3.54%
99	3 10%	3 10.7%	2 8.00%	4 13.3%	12 10.6%
total	30 100%	28 100%	25 100%	30 100%	113 100%

Table 6.4 Most important skill teachers in each setting considered themselves responsible for teaching

	DD Preschool	DD School	NDD Preschool	NDD school	Total
1	2 6.67%	10 35.7%	0 0%	11 36.7%	23 20.4%
2	0 0%	0 0%	0 0%	1 3.33%	1 0.885%
3	4 13.3%	2 7.14%	7 28.0%	1 3.33%	14 12.4%
4	6 20%	4 14.3%	4 16.0%	4 13.3%	18 15.9%
5	9 30.0%	5 17.9%	10 40%	3 10%	27 23.9%
6	0 0%	0 0%	0 0%	2 6.67%	2 1.77%
7	2 6.67%	3 10.7%	3 12.0%	0 0%	8 7.08%
8	4 13.3%	2 7.14%	1 4.00%	4 13.3%	11 9.73%
99	3 10%	2 7.14%	0 0%	4 13.3%	9 7.96%
total	30 100%	28 100%	25 100%	30 100%	113 100%

Table 6.5 Most important skill teachers in each setting considered it was parents responsibility to teach

	DD Preschool	DD School	NDD Preschool	NDD school	Total
1	2 6.67%	3 10.7%	2 8.00%	3 10%	10 8.85%
2	2 6.67%	1 3.57%	1 4.00%	1 3.33%	5 4.42%
3	3 10%	2 7.14%	0 0%	0 0%	5 4.42%
4	5 16.7%	5 17.9%	3 12.0%	3 10%	16 14.2%
5	1 3.33%	2 7.14%	5 20%	6 20%	14 12.4%
6	4 13.3%	3 10.7%	4 16.0%	3 10%	14 12.4%
7	5 16.7%	10 35.7%	8 32.0%	8 26.7%	31 27.4%
8	5 16.7%	0 0%	2 8.00%	2 6.67%	9 7.96%
99	3 10%	2 7.14%	0 0%	4 13.3%	9 7.96%
total	30 100%	28 100%	25 100%	30 100%	113 100%

Table 6.6 Parents in each setting who chose each of the eight skills categories as most important for children to learn

	DD Preschool	DD School	NDD Preschool	NDD school	Total
1	25 25.8%	28 27.7%	10 11.2%	16 16.8%	79 20.7%
2	3 3.09%	2 1.98%	1 1.12%	1 1.05%	7 1.83%
3	8 8.25%	5 4.95%	8 8.99%	8 8.42%	29 7.59%
4	10 10.3%	8 7.92%	14 15.7%	15 15.8%	47 12.3%
5	22 22.7%	22 21.8%	28 31.5%	18 18.9%	90 23.6%
6	10 10.3%	17 16.8%	5 5.62%	13 13.7%	45 11.8%
7	8 8.25%	11 10.9%	4 4.49%	6 6.32%	29 7.59%
8	11 11.3%	8 7.92%	19 21.3%	18 18.9%	56 14.7%
total	97 100%	101 100%	89 100%	95 100%	382 100%

Table 6.7 Parents in each setting who chose each of the eight skills categories as least important for children to learn

	DD Preschool	DD School	NDD Preschool	NDD school	Total
1	11 10.7%	7 6.86%	9 10%	10 9.90%	37 9.34%
2	38 36.9%	32 31.4%	25 27.8%	47 46.5%	142 35.9%
3	11 10.7%	19 18.6%	11 12.2%	12 11.9%	53 13.4%
4	7 6.80%	8 7.84%	10 11.1%	10 9.90%	35 8.84%
5	1 0.971%	1 0.980%	1 1.11%	4 3.96%	7 1.77%
6	8 7.77%	6 5.88%	15 16.7%	1 0.990%	30 7.58%
7	8 7.77%	10 9.80%	7 7.78%	2 1.98%	27 6.82%
8	6 5.83%	17 16.7%	11 12.2%	8 7.92%	42 10.6%
9	2 1.94%	0 0%	0 0%	0 0%	2 0.505%
99	11 10.7%	2 1.96%	1 1.11%	7 6.93%	21 5.30%
total	103 100%	102 100%	90 100%	101 100%	396 100%

Table 6.8 Number of parents in each setting who chose each of the eight skills categories they believed were most important to teachers

	DD Preschool	DD School	NDD Preschool	NDD school	Total
1	17 23.0%	24 29.3%	16 18.8%	23 31.9%	80 25.6%
2	2 2.70%	3 3.66%	0 0%	2 2.78%	7 2.24%
3	12 16.2%	9 11.0%	23 27.1%	9 12.5%	53 16.9%
4	4 5.41%	9 11.0%	4 4.71%	8 11.1%	25 7.99%
5	23 31.1%	12 14.6%	24 28.2%	7 9.72%	66 21.1%
6	10 13.5%	16 19.5%	9 10.6%	9 12.5%	44 14.1%
7	2 2.70%	7 8.54%	3 3.53%	6 8.33%	18 5.75%
8	4 5.41%	2 2.44%	6 7.06%	8 11.1%	20 6.39%
total	74 100%	82 100%	85 100%	72 100%	313 100%

Table 6.9 Most important skill parents in each setting considered themselves responsible for teaching

	DD Preschool	DD School	NDD Preschool	NDD school	Total
1	23 30.7%	27 33.3%	16 19.5%	35 49.3%	101 32.7%
2	2 2.67%	1 1.23%	0 0%	1 1.41%	4 1.29%
3	11 14.7%	10 12.3%	17 20.7%	8 11.3%	46 14.9%
4	7 9.33%	10 12.3%	11 13.4%	5 7.04%	33 10.7%
5	16 21.3%	11 13.6%	17 20.7%	10 14.1%	54 17.5%
6	6 8%	11 13.6%	5 6.10%	5 7.04%	27 8.74%
7	3 4%	4 4.94%	7 8.54%	1 1.41%	15 4.85%
8	7 9.33%	7 8.64%	9 11.0%	6 8.45%	29 9.39%
total	75 100%	81 100%	82 100%	71 100%	309 100%

Table 6.10 Most important skill parents in each setting considered it was teachers responsibility to teach

	DD Preschool	DD School	NDD Preschool	NDD school	Total
1	14 18.7%	9 11.1%	4 4.88%	7 9.86%	34 11.0%
2	1 1.33%	4 4.94%	1 1.22%	0 0%	6 1.94%
3	5 6.67%	3 3.70%	9 11.0%	4 5.63%	21 6.80%
4	15 20%	5 6.17%	10 12.2%	12 16.9%	42 13.6%
5	11 14.7%	19 23.5%	25 30.5%	7 9.86%	62 20.1%
6	13 17.3%	24 29.6%	8 9.76%	18 25.4%	63 20.4%
7	7 9.33%	8 9.88%	6 7.32%	11 15.5%	32 10.4%
8	9 12%	9 11.1%	19 23.2%	12 16.9%	49 15.9%
total	75 100%	81 100%	82 100%	71 100%	309 100%

APPENDIX 7 | CHILD AND ADULT OBSERVATIONS

Figure 7.1 Combined observation systems data collection schedule

TIME	DAY 1						DAY 2					
	MOT	AB	CA 1	CA 2	CA 3	CA 4	MOT	AB	CA 1	CA 2	CA 3	CA 4
9:00												
9:10												
9:20												
9:30												
9:40												
9:50												
10:00												
10:10												
10:20												
10:30												
10:40												
10:50												
11:00												
11:10												
11:20												
11:30												
11:40												
11:50												
12:00												
12:10												
12:20												
12:30												
TOTAL	3-3½ hr	20 mins	20 mins	20 mins	20 mins	20 mins	3-3½ hr	20 mins	20 mins	20 mins	20 mins	20 mins

The following tables are available in Early Childhood Research Centre, DIT, on request.

Table 7.1	Percentage of time teachers propose that children spend in various group structures in NDD preschools
Table 7.2	Percentage of time teachers propose that children spend in various group structures in DD preschools
Table 7.3	Percentage of time teachers propose that children spend in various group structures in NDD schools
Table 7.4	Percentage of time teachers propose that children spend in various group structures in DD schools
Table 7.5	Group structure intended for major type of teacher-proposed activity in designated disadvantaged/non designated disadvantaged preschools
Table 7.6	Group structure intended for major type of teacher-proposed activity in designated disadvantaged/non designated disadvantaged schools
Table 7.7	Percentage of observations in each major adult behaviour category in NDD preschools
Table 7.8	Percentage of observations in each major adult behaviour category in DD preschools
Table 7.9	Percentage of observations in each major adult behaviour category in NDD schools
Table 7.10	Percentage of observations in each major adult behaviour category in DD schools
Table 7.11	Percentage of observations in each degree-of-involvement category in NDD preschools
Table 7.12	Percentage of observations in each degree-of-involvement category in DD preschools
Table 7.13	Percentage of observations in each degree-of-involvement category in NDD schools
Table 7.14	Percentage of observations in each degree-of involvement category in DD schools
Table 7.15	Percentage of observations in each degree-of-involvement category for each adult behaviour category in NDD preschools
Table 7.16	Percentage of observations in each degree-of-involvement category for each adult behaviour category in DD preschools
Table 7.17	Percentage of observations in each degree-of-involvement category for each adult behaviour category in NDD schools
Table 7.18	Percentage of observations in each degree-of-involvement category for each adult behaviour category in DD preschools

APPENDIX 8 | CHILD DEVELOPMENT STATUS

The following tables are available in Early Childhood Research Centre, DIT, on request.

Table 8.1 NDD preschool test scores
Table 8.2 DD preschool test scores
Table 8.3 NDD school test scores
Table 8.4 DD school test scores
Table 8.5 Girls test scores
Table 8.6 Boys test scores

APPENDIX 9 | LIST OF DATA COLLECTORS

Susan Barry
Karen Belshaw
Jackie Burke
Mary Carthy
Clíona Clarke
Lucy Connolly
Margaret Cooley-Griffen
Ann Marie Cummings
Caroline Dennehy
Yvonne Duffin
Patricia Egginton
Sarah Fitzsimons
Rita Flannagan
Alan Gregory
Joan Guilfoyle
J. Halliday
Frank Houghton
Thelma Hunter
Bethamy Imbusch
Anne Linehan
Janet Lucas
Nancy Looney
Claire Mac Donald
Ann Mc Egan
Teresa Madden
Eoin Meegan
Brian Murphy
Georgina Murphy
Geraldine Neylon
Bert O' Neill
Helen O' Neill
Siobháin O' Neill
Michael Padden
Aidan Rainsford
Helena Reynolds
Yvonne Rogers
Sharon Ryan
Carmel Staunton
Lorraine Teevan
Gerry Tobin
Natalie Vereker
Ronan Yore